Joyce

Florida WILDLIFE

Fishing · Hunting
· Conservation ·
Outdoor Recreation

Specks Are Special
Everyone Wins

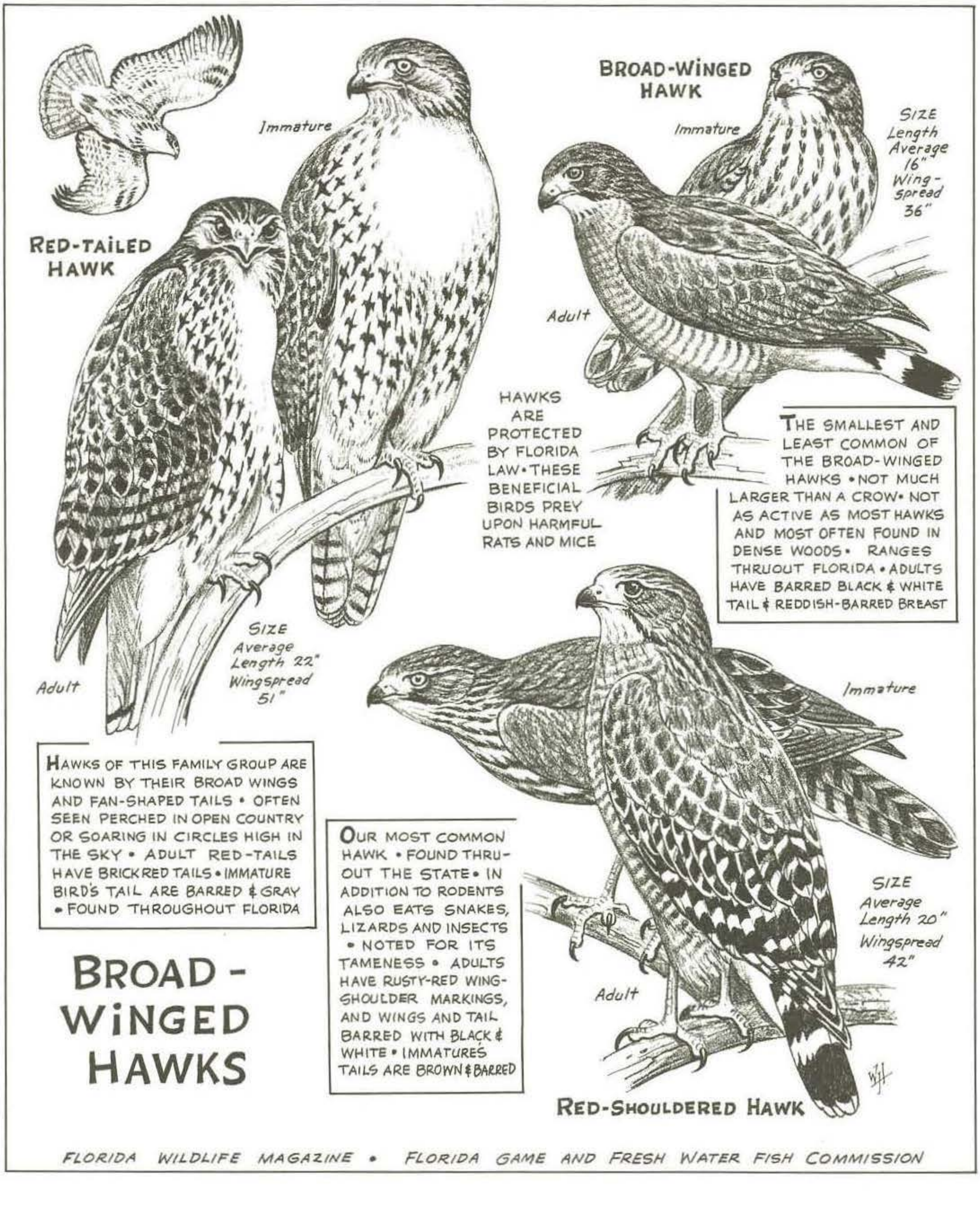
RECEIVED
FEB 5 1973
of Ma Sc ech.
ine Re rch vis
of Na

ECEIVED
FEB 5 1973
rine Scienc
search Divisi
atural Resourc

JANUARY 1973 *The Florida Magazine for all Sportsmen* 35 CENTS

LIBRARY
MARINE RESEARCH LABORATORY

Florida Wildlife Scrapbook



RED-TAILED HAWK
Immature
Adult
SIZE Average Length 22" Wingspread 51"
BROAD-WINGED HAWK
Immature
Adult
SIZE Length Average 16" Wing-Spread 36"
Immature
Adult
SIZE Average Length 20" Wingspread 42"
RED-SHOULDERED HAWK
WH

BROAD-WINGED HAWKS

HAWKS ARE PROTECTED BY FLORIDA LAW • THESE BENEFICIAL BIRDS PREY UPON HARMFUL RATS AND MICE

HAWKS OF THIS FAMILY GROUP ARE KNOWN BY THEIR BROAD WINGS AND FAN-SHAPED TAILS • OFTEN SEEN PERCHED IN OPEN COUNTRY OR SOARING IN CIRCLES HIGH IN THE SKY • ADULT RED-TAILS HAVE BRICKRED TAILS • IMMATURE BIRD'S TAIL ARE BARRED & GRAY • FOUND THROUGHOUT FLORIDA

THE SMALLEST AND LEAST COMMON OF THE BROAD-WINGED HAWKS • NOT MUCH LARGER THAN A CROW • NOT AS ACTIVE AS MOST HAWKS AND MOST OFTEN FOUND IN DENSE WOODS • RANGES THRUOUT FLORIDA • ADULTS HAVE BARRED BLACK & WHITE TAIL & REDDISH-BARRED BREAST

OUR MOST COMMON HAWK • FOUND THRU-OUT THE STATE • IN ADDITION TO RODENTS ALSO EATS SNAKES, LIZARDS AND INSECTS • NOTED FOR ITS TAMENESS • ADULTS HAVE RUSTY-RED WING-SHOULDER MARKINGS, AND WINGS AND TAIL BARRED WITH BLACK & WHITE • IMMATURES TAILS ARE BROWN & BARRED

FLORIDA WILDLIFE MAGAZINE • FLORIDA GAME AND FRESH WATER FISH COMMISSION

Florida WILDLIFE

VOL. 26, NO. 8

JANUARY 1973

official publication of the
Game & Fresh Water Fish Commission
State of Florida

★

Publications Department

BILL HANSEN *Editor*

WALLACE HUGHES *Art Director*

GENE SMITH *Associate Editor*

NANCY CHOIKE *Production Assistant*

C. L. SATTERFIELD *Circulation*

In This Issue

Listening in on Wildlife .... J. Greg Williams **4**

Everyone Wins .... Charles Dickey **10**

Specks are Special .... Gene Smith **14**

A Colony of Crabs .... Norman Frank **18**

Wishing Well Bass .... Robert B. Weaver **22**

Departments

Wildlife Officer Notes **6**

Fishing **7**

Hunting **25**

Fish Management Notes **27**

Conservation Scene **30**

The Cover

A favorite game fish during fall and winter in Florida, the black crappie is better known as speckled perch, or just plain speck. See page 14.

From A Painting By Wallace Hughes

FLORIDA WILDLIFE is published monthly by the Florida Game and Fresh Water Fish Commission, Farris Bryant Bldg., 620 S. Meridian Street, Tallahassee, Fla. 32304. Single copy price, 35¢; Subscription rates: 1-year, $3.00; 2-year, $5.50; 3-year, $7.50. Change of address should be reported promptly. The Commission assumes no responsibility for unsolicited manuscripts and illustrative materials. Permission is granted to reprint text materials, EXCEPT for advertising and commercial purposes, provided full credit is given FLORIDA WILDLIFE, and contributors. Clearance must be made with photographers and artists to reproduce illustrations. Second Class Postage paid at Tallahassee, Florida.

Copyright 1973 by
Florida Game and Fresh Water Fish Commission
Tallahassee, Florida 32304

ROSE TALLAHASSEE

COMMISSION

C. A. PEACOCK, JR., Chairman
Miami

JAMES B. WINDHAM
Jacksonville

WILLIAM M. BLAKE
Tampa

O. L. PEACOCK, JR.
Fort Pierce

HOWARD ODOM
Marianna

★

ADMINISTRATION

DR. O. E. FRYE, JR., Director

H. E. WALLACE
Assistant Director

JOEL McKINNON
Administrative Assistant

JOHN W. WOODS, Chief
Fisheries Division

JAMES A. POWELL, Chief
Game Management Division

BRANTLEY GOODSON, Chief
Law Enforcement Division

JAMES T. FLOYD, Chief
Information-Education Division

★

J. H. SPENCE, Chief
Communications Division
Federal Communications Bldg.
New Smyrna Beach, Florida

★

REGIONAL OFFICES

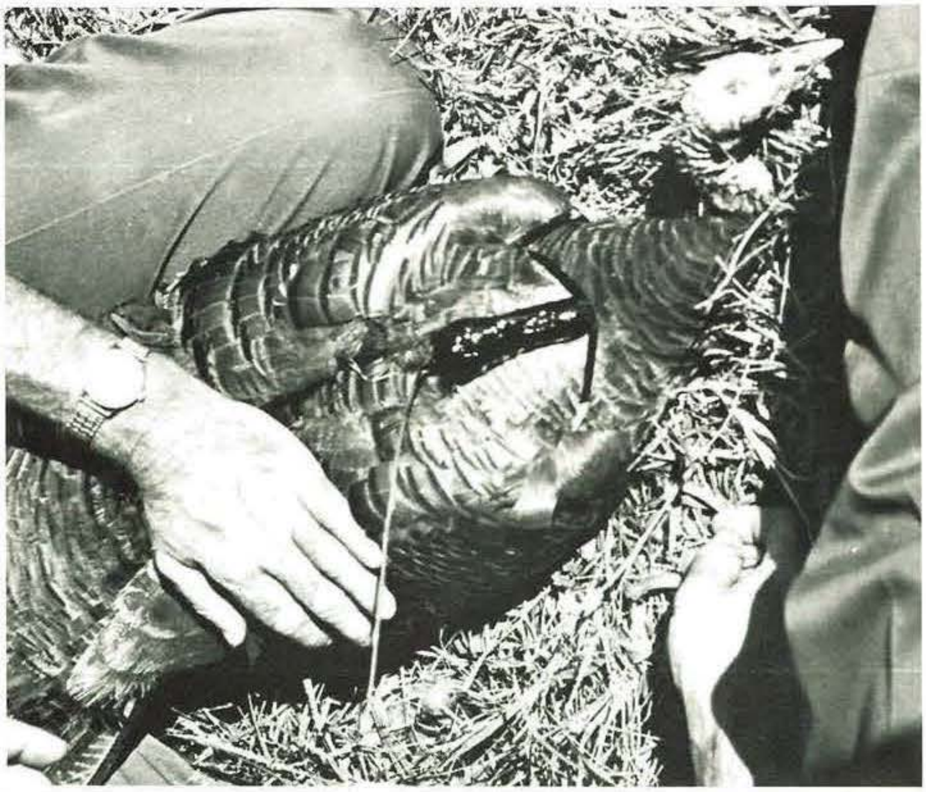
Northwest Region
T. L. GARRISON, Manager
P. O. Box 576
Panama City, Florida 32401
(904) 785-5352

Northeast Region
ROBERT BRANTLY, Manager
Route 7, Box 102
Lake City, Florida 32055
(904) 752-0353

Central Region
J. W. BICKERSTAFF, Manager
1239 S. W. 10th Street
Ocala, Florida 32670
(904) 629-8162

Southern Region
J. O. BROWN, Manager
2202 Lakeland Hills Blvd.
Lakeland, Florida 33801
(813) 686-8157

Everglades Region
LOUIS F. GAINEY, Manager
551 North Military Trail
West Palm Beach, Florida 33406
(305) 683-0748



1

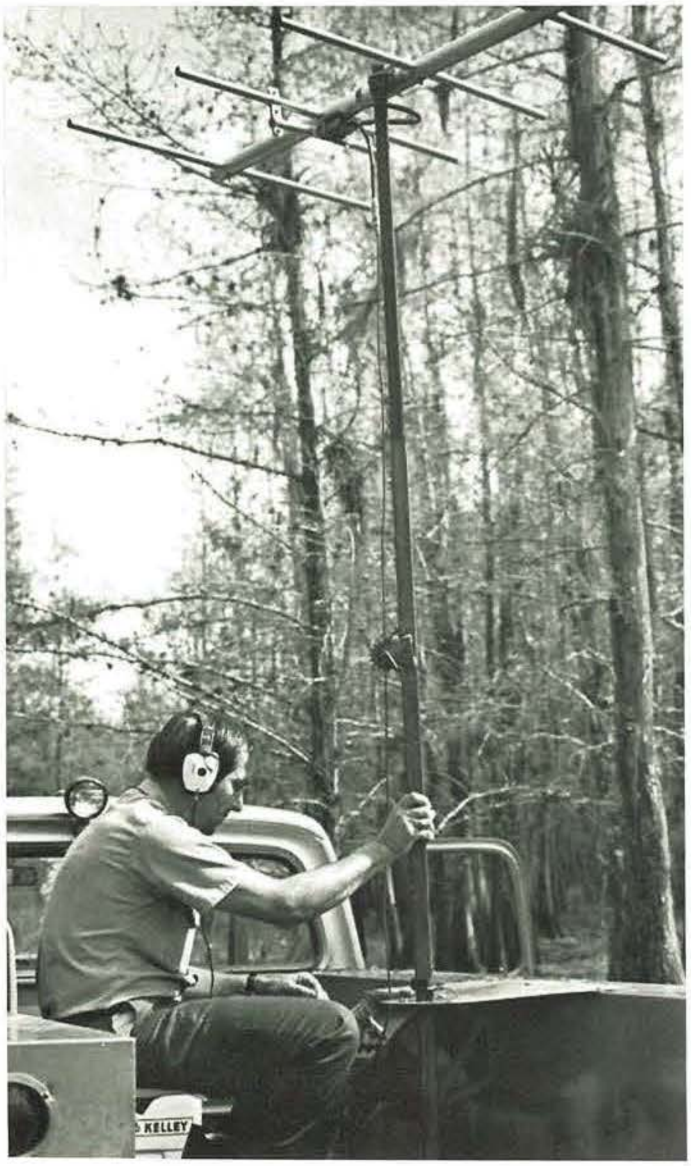
Photo By Lovett Williams

Listening in on Wildlife

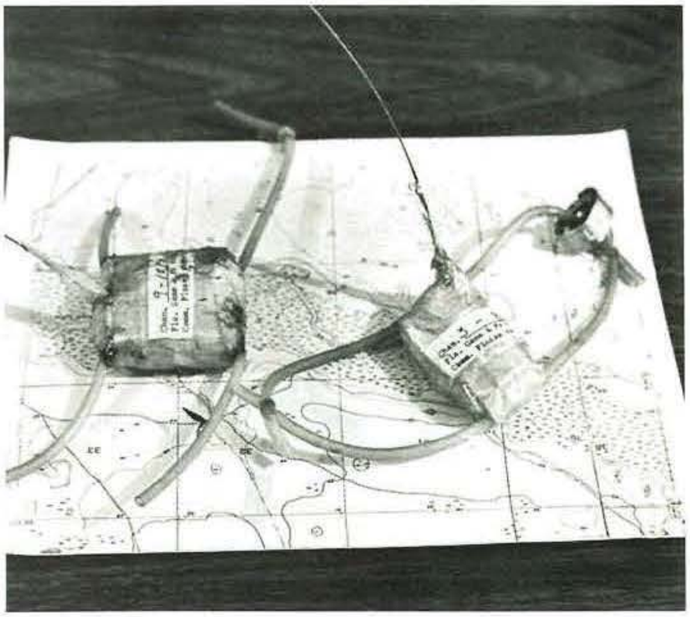
prying into the wild turkey's private life is an important part of modern wildlife research

By J. GREG WILLIAMS

2



3



Photos By J. Greg Williams

"WE'RE BECOMING SO GOOD at tracking wild turkeys," Bill chuckled, "we're beginning to think like turkeys."

Thinking like wild turkeys has given Wildlife Biologist Lovett Williams and Game Manager Bill Frankenburger quite an advantage in a research project they conduct for the Florida Game and Fresh Water Fish Commission on this great American game bird. But how can they "track" these wary creatures through their habitat of dense woods and muddy swamps?

In the past, game management specialists relied chiefly on reports and sightings of banded or re-

4

Photo By Lovett Williams

trapped birds for their knowledge. Today, through modern electronics, researchers are using a radio tracking technique called *telemetry* in order to gather more detailed data on the wild turkey's life style and preferred environment. Through telemetry, game biologists have found the wild turkey thrives best on a variety of terrain.

For roosting or escape cover the turkey requires a heavily wooded area or a swamp, but in the spring or summer months it travels to the nearest grasslands in search of food.

Offering a diversity of land types, Lykes Brothers' Fisheating Creek Wildlife Management Area, in Glades County, has been the site of much of the Commission's telemetry research on both hens and gobblers, in all seasons.

Last year, approximately 30 hens and gobblers were captured in cannon nets and with baiting methods. Once selected, the bird is then released carrying a miniature radio transmitter.

The little sets, weighing approximately 4½ ounces and powered by two small batteries, are attached to the turkey's back with rubber tubing tied in square knots under each wing.

Once the bird is released, Williams and Frankenburger ready their telemetry receiving equipment and set out to obtain position fixes on each "electronic game bird."

Miniaturization in modern electronics has enabled biologists to adapt light-weight radios to both small and large animals. Here a Florida wild turkey (photo 1) is fitted with sending set (3), and released for tracking (4). Two receivers may be used: truck-mounted or portable, hand-held (photos 2 and 5).

When the signals begin to roll in, a receiver and two types of antennas are required to get an accurate fix on the turkey. Each receiver, equipped with 24 channels, is able to accommodate three different frequencies on each channel. Along with these, a small hand-held, 2-element, directional antenna is used for locating nearby birds. For more distant signals, a high-gain, multi-element antenna mounted on a vehicle is more effective.

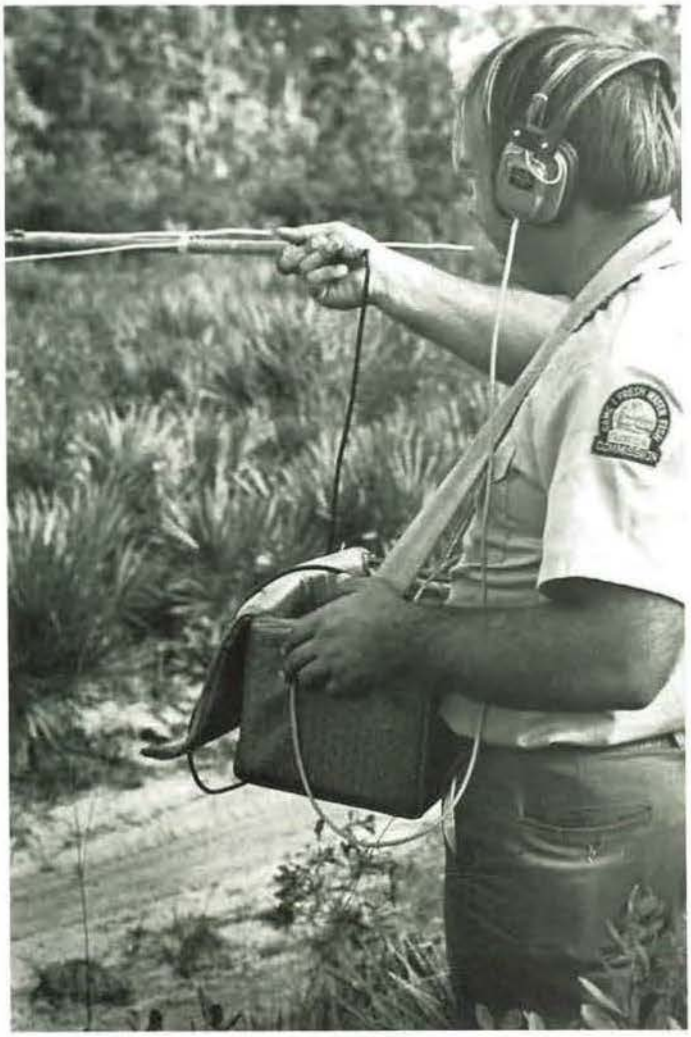
Depending on the data required, signal fixes are taken at various times of the day. For brooding or nesting research, fixes are plotted every 1 or 2 hours; if only a location check on a turkey is needed, one reading a day is adequate.

Through research gathered on the wild turkey from modern telemetry methods, wildlife biologists and ecologists have collected important data on the turkey's roosting, nesting, brood rearing, and feeding habits.

Using this data, these specialists in wildlife management are learning what the wild turkey requires to survive. Hopefully, by protecting remaining habitat and providing these requirements the future of the wild turkey in Florida can be assured. ●

5

Photo By J. Greg Williams



Wildlife Officer Notes

Ralph N. "Shorty" Donaldson, 35, of Blountstown, in the Northwest Region, was named "Outstanding Wildlife Officer of the Year" by the Florida Game and Fresh Water Fish Commission at its September meeting in West Palm Beach.

Maj. Brantley Goodson of Tallahassee, chief of law enforcement, introduced all the candidates for the 1972 officer of the year honor at the public business meeting. Besides Donaldson, they were: S. A. Rogers, of Manatee County, Southern Region; Conley Campbell, Broward County, Everglades Region; Al Clifton, Volusia County, Central Region; and Carl Hawkins, Suwannee County, Northeast Region. All the officers were commended for exemplary performances of duty.

Commission Chairman C. A. "Pete" Peacock, Jr., of Miami, announced the selection of Wildlife Officer Donaldson for the outstanding honor, and announced that he would represent the State at the 26th Annual Meeting of the Southeastern Association of Game and Fish Commissioners, which convened at Knoxville, Tennessee, in October. Outstanding officer selectees from all 16 member states were recognized and further honored there during the Law Enforcement Section conferences.

Donaldson is a native of Holmes County, as is his wife, the former Evelyn Mitchell. They have three children: Jim, 10; Kim, 7; and Tim, 5. He has 10 years service with the Commission, all in law enforcement in Calhoun County.

Lt. Elliott H. Lott, of Okeechobee, resigned his duties at the end of September 1972, terminating almost 17 years service with the Game and Fresh Water Fish Commission. His resignation was accepted with regrets.

Lott, 53, was employed as a wildlife officer in October 1955. He was promoted to supervisor of law enforcement in August 1960, and had served since that time as field supervisor of wildlife officers in Martin, St. Lucie, Indian River and Okeechobee counties. More recently, Palm Beach and Hendry counties had been included in his enforcement area. (All are in the Everglades Region.)

Lott was born in Laurel Hill, in north Okaloosa County, and is a graduate of Mainland High School, Daytona Beach.

Prior to his employment by the Commission he was a commercial sign painter-artist-cartoonist, and a ranch hand.

"Deer islands are for deer, not swamp buggies and halftracks," advised Regional Manager Louis F. Gainey, West Palm Beach, as he warned sportsmen that no vehicles are permitted on the islands, manmade or natural, in the Everglades Wildlife Management Area.

"These plots represent what could be the only safe location for much of our wildlife during flood periods," said Maj. Gainey. "The islands must be left alone. If hunt vehicles grind across them, chopping vegetation and packing down the turf, much of the value of the islands will be wasted."

Commission funds, sportsman club money and labor, and other sources permitted construction of more than forty ¼-acre, and larger, plots of raised ground in the Everglades which give deer and other forms of wildlife havens of safety—cover, dry bedding spots, and food—during periods of high water.

According to Maj. Gainey, the "no vehicles allowed" regulation also applies to the natural tree islands, which offer protection for Everglades game, as well as to that portion of the management area between the Old Miami Canal and the New Miami Canal.

Violators of this and other wildlife management area regulations are subject to arrest and, upon conviction, possible heavy fines, plus loss of their hunting and fishing privileges.

Sgt. Jimmy L. Cook, 32, became Florida's second wildlife law enforcement officer to die in line of duty in 1972 when he drowned after having fallen or been thrown from his boat on December 8th. The accident occurred in Lake Lowery, in Polk County. (Sgt. H. C. Chapin, of Tallahassee, was fatally shot November 5, 1972.)

According to reports, Cook and wildlife officer Gary Colson, of Lakeland, had been on water patrol. After putting Colson ashore at the fishing camp from which they had departed, Cook went back into the lake (via an access canal—the lake is not visible from the boat launching ramp) to check out a mechanical problem with the outboard motor. When he failed to return in a reasonable length of time, Colson borrowed a boat and motor and went to investigate. He found Cook's empty boat, with the motor still running.

A large search and rescue operation failed to locate the body until two days later.

Sgt. Cook is survived by his wife, the former Rosa Eger, of Augsburg, Germany, a daughter, 8, and two sons, ages 4 and 10. He joined the Game and Fish Commission in 1965 and had served until November 1972 as a wildlife officer in the Everglades Region. Upon promotion to sergeant he was transferred to Polk County, in the South Florida Region.

Cook was named Florida's Outstanding Wildlife Officer of the Year in 1970 (See "Wildlife Officer Notes," Florida Wildlife, September 1970, page 9).

He was a native of Bridgeboro, Georgia, and a 1958 graduate of Manatee High School, Bradenton, Florida. ●

Jumping Fish

nothing provides more excitement than game fish that take to the air once the hook is set—but they are the easiest ones to lose

By CHARLES WATERMAN

SOME SAY THAT A FISH has to jump when hooked or it isn't a game fish. I won't go along with that, but the jumping business is a pretty interesting phase of angling.

For example, a king mackerel, or "kingfish," will make a tremendously high jump into the air and come down on a bait. Then, once he's hooked, he seldom if ever comes out.

Black bass, both smallmouths and largemouths, have two distinct kinds of jumps. There's the head-shaking thing in an effort at throwing the bait, and then there's the longer jump with mouth closed, or nearly closed, in which the fish seems to take to the air simply because he can't go fast enough in the water.

Although they look very different from a bass in the air, the tarpon has a similar repertoire, and the veteran guides will call one jump "swimming into the air." That's the greyhounding type of leap in which he covers a lot of distance. The head-shaker is simply one that goes nearly straight up and the fish is out of the water because it can shake better there.

There are some kinds of fish they say never jump, no matter what happens. A few swim so slowly that they couldn't if they wanted to, but there are some very quick fish that very seldom clear the water.

About the most unlikely jumper of all is the bonefish. I never saw one jump on a line, but I once saw a bunch of bonefish get into a tight crowd on a shallow flat. They were a little flustered and evidently jostled one of their number so roughly that he actually squirted up into the air—so they *can* jump.

What fish jumps the highest when hooked? Well, I didn't used to believe it, but after looking at quite a few photos, both still and moving, I believe some of the trouts will go higher for their length than will salt water jumpers like sailfish and dolphin. Perhaps the rainbow trout is the best jumper of all. The Atlantic salmon is right in there—but the dolphin goes pretty high, too. I think the tarpon is the wildest twister in flight.

There are all sorts of rules to follow when a fish jumps. Black bass can be pulled over if your tackle is heavy enough, but some fishermen like to watch them jump and would rather not interfere. If it's a matter of putting the fish in the boat, I guess you should keep a taut line on a bass with a heavy plug in his chops and give him slack if the lure is very light and the line or leader very delicate.

It's a universal rule to *bow* to really heavy fish when they jump—that is, you push the rod tip toward the fish so it won't fall against a tight line. Some anglers do that in exaggerated fashion, and fly fishermen working on very large tarpon will sometimes thrust the rod out at arm's length, and even jump toward the fish as far as deck space will allow. With large offshore fish, when the angler is using a fighting chair, he generally has to let his reel drag and line resistance in the water take care of the added shock of a jump.

Is it harder to land a fish that jumps? Certainly not, unless he ends the ball game by throwing the lure. A fish that jumps uses up an enormous amount of energy very quickly. Very large fish can jump themselves out completely. After each jump there is likely to be a short period during which the fish has very little steam, and a watchful angler can generally get some line very quickly if he pumps hard. Many fishermen believe that by forcing the fight at this point you can discourage the fish and possibly land it before it's really tired out. There's no doubt that many are landed fairly green, and a fumbled net or gaff has started many a fight over again.

Many fish shake their heads and vibrate in flight, but I believe the black bass and the tarpon are most likely to throw a hook. The ladyfish is perhaps the wildest leaper of all, but doesn't seem to get rid of the problem as well as some of the others. I'd say that it's speed and violence rather than height that distinguish most ladyfish leaps. The mullet, a compulsive jumper on his own, seldom jumps when hooked.

It may be dangerous ground, but I'll come out and say I've had bass throw spoons more than any other baits, and that goes for both single-hooked and treble-hooked spoons. With spoons, I'm inclined to keep a tight line—and if you really want him you'd better pull him down if you can. Once he gets it shaking, a bass can do a very good job indeed.

Unless the fish is so small he can't get out of

(*Continued on next page*)

(Continued from preceding page)

the water with it, a heavy and bulky lure will cause more jumping than a light one. Despite a rather popular opinion, fish like snook or large black bass do not jump as much with flies as they do with plugs. It is true the plug is more restrictive of the fish's movements, but it is very easy for him to tell exactly what is bothering him. He tries to throw the plug away, and the fly is a rather vague thing that restricts him in a mysterious way. At risk of making some fly fishermen sore, I'm of the opinion there is an occasional fish which never really gets started when hooked on a fly outfit. The pressure is so mild that the victim just swims around until he's pooped without ever really getting steamed up.

I have always wondered why certain fish jump and others don't. The bass is a jumper in most cases, but close relatives, the bluegill, crappie, green sunfish and warmouth don't do it except in a wallowing surface lunge or two—and it's not really a jump made on purpose. Some may say the bass is more intelligent. Maybe so, but the jumping business is not confined to the highest intelligence. They say the fresh water trout isn't a very high order of fish—but then, fish I.Q.'s aren't easy to measure.

UNLESS IT'S SPLASHING AROUND on top or raking the bottom, few fishermen have much of an idea as to the depth their lures are running. The deeper the water, the more important this becomes. In fishing well offshore, ocean anglers go to great pains to get the depth exactly right as they may be involved with hundreds of feet or even fathoms, and fish may be at a consistent depth. Make a minor miscalculation and all you get is a boat ride while everybody else cleans up. I've watched this happening with mackerel several times—being in the right boat sometimes and in the wrong boat sometimes.

Bass and panfish lures fool their users. I've watched spinfishermen who swore they were "fishing deep" when the lure was just enough below the surface to avoid making a wake on top. Remember that when you work an underwater lure fairly rapidly that it runs progressively nearer the surface as it comes in.

The classic method of learning the right fishing depth is to allow the lure to sink after it is cast and then bring it in with a high rod tip. If you get a strike or two very near your casting point, chances are the fish are looking for something near the surface. If all business is done early in the cast, the lure is well down near the bottom, and you should work up something that tends to stay down there.

Strangely, many fishermen don't understand the effect of changing the angle of a plug's metal lip, if it has one. Once when I was expounding on the effect of bending the lip and said it would run deeper if you bent it *up*, a fellow offered to bet me real money that bending it *up* would make it run shallower while bending it *down* would make it go deeper.

Of course, there's a gimmick here. If the thing is bent up too far, it will simply carry the plug to the surface as it won't hook into the water at all. The rule of thumb is that as long as the lip is not quite straight ahead of the plug it pulls down. Once it is bent so that it tilts upward from where the line is fastened, it *does* pull upward.

Plastic worms often aren't running at the depth the user assumes, especially if they're only slightly weighted. Remember that the pull is always upward, and the farther you retrieve the shallower your bait tends to go. The answer is to reel slower as it approaches the rod if you want it to stay down.

If you're actually bumping the bottom you'll note it's much easier to keep the lure there in the early part of the retrieve for the lifting action of the rod isn't so pronounced there. With most lures, the longer the cast the faster you can reel and still keep it down there.

Depth is much easier to regulate if the line is of small diameter, especially with very small lures. One of the early triumphs of monofilament line was that it didn't haul bait to the surface the way braided lines did. I know that some fishermen thought the new stuff was magically invisible, whereas their real reason for new success was a simple matter of retrieving at a somewhat greater depth. The same went for some kinds of trolling.

OF THE NUMEROUS FISH I have lost through stupidity—after they were hooked—a surprising percentage have left because the lure came apart. Generally, it's a matter of a set of treble hooks pulling out of a plug. Occasionally, the hook breaks. Once or twice the eye has come out of the front of the lure.

This bull dolphin is living up to his much deserved reputation as one of the jumpingest fish in the sea.

Exact lure depth is of top importance in most kinds of fishing—especially when trolling method is used.

Some of these foul-ups have been due to sloppy construction, but most of them have happened because the plug had been around for a long while and no one had ever checked to see if it was still hung together.

Along about midwinter, it used to be standard procedure for northern outdoor writers to devote a few pages to getting your tackle out and checking it in preparation for opening day. In a section of the country where you fish the year around, there's probably less fiddling with tackle, and where a guy goes fishing instead of wishing, he just doesn't bother much.

Wooden plugs are the worst offenders in the deterioration business. No matter how durable the paint, water is likely to enter where the hook is screwed in, soften the wood, and possibly rot it, and the screw lets go at the wrong time. If the eyed screw that holds the hook is turned out a couple of revolutions anyway, the wood holds it even less.

This kind of horror occurs most frequently in areas where there are frequent hangups in brush or grass. Constant hard yanking on the hooks will loosen them sometimes, even when the wood is all right. You can well be suspicious of any wooden lure that has spent a lot of time in the water.

Plastic plugs aren't completely free of the problem, but in this case it's usually a matter of the screw corroding or rusting. However, since plastic tends to hold screws well, I've seen a few occasions when the screws were too flimsy for hard use. Of course, the sensible precaution with any lure is to yank on the hooks now and then to see if they're still solid. I can't remember doing that a dozen times in my life while fishing. Can you?

The poorest risks are fresh water plugs taken to salt water and subjected to really heavy fish and strong lines. Twenty years ago when there weren't many small plugs used in salt water, that was one of the ever-present problems in fishing heavy fish with plugging gear. Few bass plugs were built with 100-pound tarpon or 50-pound cobia in mind.

Some of the best salt water plugs made for heavy use have the hooks fastened to a wire that runs full length of the lure. With that rig you still have him on the hook, even if he eats the plug. Barracuda are noted for disposing of the softer parts, and if you travel north, you'll find the same thing with pike or muskies.

Aside from the business of biting the hook off or pulling it off, there is the problem of crushing and twisting with extremely heavy takers. It is very seldom that an extremely large salt water fish is landed on a light plug without some of the hooks being bent and any time a hook is bent there have been some pressures a little beyond the call of light duty.

This plug durability thing becomes more important as the line strength is increased. A spinfisherman who has been using 6- or 8-pound test line for years without difficulty may find his plugs coming apart when he goes to 20-pound line for a special purpose.

THE LOWLY JOHN BOAT, now made mostly from aluminum in factories of the South and Midwest, is appearing more and more on the western trout rivers. For some years now it has been pretty widely accepted as the most boat for the money on small waters. It got its start, you know, on the Ozark streams where guides ran their sports downstream, using paddles. Oh, there may have been John boats elsewhere, but it was in that neck of the woods they really had their big beginnings. Nobody knows who made the first one or where he made it.

Anyway, in those western rivers, some of them pretty swift, the operator generally uses oars with the bow of his boat upstream. He faces downstream and rows upstream to keep things under control. In most cases, the only change made in the conventional John boats is reinforcement of the oarlock. Most aluminum John boats have light duty oarlocks (or *rowlocks*, if you want to be persnickity) riveted to the light aluminum. Those who expect to work hard in holding a John boat against heavy current usually have heavy plates fastened to the standard boat in order to keep the oarlocks solid and permanent.

In most cases the John boat is replacing rubber or plastic boats. The next step is a specially built and much more expensive river boat made of wood with the bottom turned up drastically at both bow and stern. It's a good, safe boat, and used in some of the bigger and wilder rivers, but it's much heavier than the John boat and unwieldy on some smaller creeks.

The most common length for the guide John boat used out West is 14 feet. ●

Department of Commerce Photo

Everyone Wins

only part of the value of hunting and fishing can be measured

HOUND DOG MUSIC doesn't please every ear, and, by the same token, not everyone goes in for grand opera. But there's one kind of music that affects us all: the jingling of cash register bells. Every segment of Florida's economy benefits from money spent by hunters and fishermen. Sportsmen's dollars go for motels, guide services, gas and oil, bait, gun shells, sardines, dog food, and literally scores of other items which feed back into the state's general economy.

It's well known by the concerned sportsman, but hardly at all by the public, that the sportsmen's ante supports fresh water fish and game management, plus many other conservation programs. This money is paid by sportsmen in their purchase of licenses and permits, and payment of a 10 per cent tax on fishing equipment and an 11 per cent tax on sporting firearms and ammunition. Although all of the people of Florida, plus the tourists, benefit from sportsmen's programs, it's the hunter and fisherman who have paid the bill for years, and still do.

While nearly everyone realizes a high percentage of Americans enjoy getting outdoors, it takes a survey like the U.S. Department of Interior's to reveal the magnitude. Their figures have plus or minus accuracy factors, but they're the best statistics available, along with various state surveys.

Interior's study was mainly concerned with "substantial" sportsmen, defined as those who fished or hunted during all or part of at least 3 days, or who spent $7.50 or more on these sports during 1970. These 36 million "substantial" fishermen and hunters spent the staggering sum of $7.1 billion that year!

On a national basis, the "substantial" fishermen spent more than $4.9 billion, took over 576 million fishing trips, averaged spending $7.02 on each recreation day, and drove more than 28.7 billion miles.

The "substantial" hunters spent over $2.1 billion, took more than 176 million trips, spent $10.52 on each recreation day, and traveled more than 9.1 billion passenger miles by automobile.

Gasoline station operators, car dealers, and Detroit should appreciate sportsmen, even if a lot of wives don't.

If you were a completely average fisherman in 1970, here's how your dollars were spent, on a percentage basis: 30.0 for auxiliary equipment; 9.4 for fishing equipment; 30.8 for bait, guides and incidentals; 25.9 for food, lodging and transportation; 2.2 for licenses; and 1.7 for privilege fees.

If you were Mr. Average Hunter, here's how your expenditure broke down: 26.2 per cent for auxiliary equipment; 28.3 for hunting equipment; 21.0 for guides, dogs and incidentals; 17.3 for food, lodging and transportation; 3.6 for licenses; and 3.6 for privilege fees.

Chances are, you believe you spent more, but tried to convince your wife you spent less.

By CHARLES DICKEY

The breakdown on dollar expenditures may startle some old-timers. Most of the dollars for outdoor fun do not go for the cost of direct equipment such as rods, reels, shotguns, and shells.

The statistics clearly show that the cheapest part of their recreation dollar is license fees, which go to maintain and improve their sport. On a national basis, only 2.2 per cent of the fisherman's dollar goes for licenses and 3.6 per cent of the hunter's dollar. It's a small price to pay! It's really the best buy the sportsman gets for his money. If inflation and demands on state game and fish departments for more services and programs cause license fees to go up, the sportsman has little reason to complain, especially if he looks at license cost in comparison to his total cost of hunting and fishing.

The national statistics are a big help in working out statistics on what hunters and fishermen spend each year in Florida, but there are loopholes. For many reasons, not everyone who fishes or hunts has to purchase a license. For instance, people under certain ages and over certain ages do not need licenses. No license is required at all for salt water fishing, certainly a major factor in Florida.

In the 1971-72 season, 255,952 resident and non-

(*Continued on next page*)

American anglers spend about seven dollars per day, says the latest national survey. Accessories, basic equipment, left, mount up in a year, as do bait, fuel and food costs. Hunters, below, pay over ten dollars per recreation day.

Photo By Wallace Hughes

Photo By Gene Smith

(*Continued from preceding page*)

resident hunting licenses were sold in Florida. No one knows for sure how many hunters there were who legally hunted without purchasing a license. Interior's survey showed that on a national basis, 21.4 per cent of the hunters were license exempt. Assuming this average is applicable to Florida, the non-licensed hunters would number about 88,000. The total hunters for the 1971-72 season, both licensed and unlicensed, would have been about 344,000.

The average hunter spends $149.46 per season, according to Interior. If you accept these figures, then 344,000 hunters in Florida spend more than $51 million a season.

Working the same way, in the 1971-72 season 853,610 fishing licenses were bought, but about 38.6 per cent of the fishermen did not have to buy licenses, or about 525,000. This would be a total of about 1,379,000 fishermen. Using an average expenditure of $149.55 per season, it would mean that fishermen in Florida spend about $206 million a year.

"Whoa," you say, "What about the short-stay, non-resident?"

The number of non-resident hunters is almost insignificant in the broad state picture, but it is a definite factor with non-resident fishermen. Many non-resident fishermen stay in expensive motels and pay high prices for charter boats, especially for salt water fishing. There is no question but that the short-stay vacationist spends more on a dream trip to Florida than he normally would. While it's a gray area, with much interpolation, we're taking the $206 million as a conservative statistic for fisherman expenditure in Florida in a year.

The hunter and fisherman together spend about $257 million a year, if you'll accept our math. But no matter how you figure it, sportsmen are important to the total economy of the state. Hunting and fishing dollars filter into the most luxurious hotels and to the smallest crossroads store where a fisherman fills his gas tank.

If you'd like an idea of how important the sportsman vote could become on conservation issues, here are some national statistics from Interior's report. In 1970, there were 24.5 million households in America with one or more fishermen or hunters. One out of every three men in America fished, and one out of every nine was a fisherwoman. According to Interior, one in every five men went hunting in 1970, and one in every 94 women was a huntress.

As for the future generation, in 1970, 5.4 million young sportsmen, ages 9, 10 and 11, went fishing, and more than 1 million of that age group went hunting.

Assuming that sportsmen could be organized nationally to vote uniformly on critical issues, they could not only control conservation developments, but be a major factor in other areas. American sportsmen and sportswomen form a grassroots political base of enormous potential power.

Where do all of the hunters and fishermen come from? This should give some idea: In 1970, 12.3 per cent of the people living in big cities fished, 19.8 per cent of those in small cities did, and 25.5 per cent of the people living in rural areas and small towns wet a line.

For nimrods, it broke down to: 3.7 per cent of all big city people hunted, 6.4 per cent from smaller cities went hunting, and 13.3 per cent of the small town and rural people toted a sporting firearm.

It's probably all right if your wife gets a copy of Interior's national survey. One interesting statistic implies that the average dedicated hunter or fisherman lives a clean life, spending only $7.58 a year on alcoholic beverages while on hunting and fishing trips. And the study indicates that the average sportsman is more interested in participating in his favorite leisure than becoming involved in organizations. The average hunter or fisherman spent only $1.03 on his 1970 general club dues, and 54¢ on special dues.

Another interesting set of statistics, which any parent of teen-agers could have predicted, is that youngsters 16 to 18 years of age suddenly lose interest in hunting and fishing. The bottom drops out of the graph on this age group during the courtship years, but picks up after 18 and zooms on up until age 35.

The national survey, which is done every 5 years, provides valuable statistical information to show just how important sportsmen are in dollars and cents. It shows how sportsmen's dollars provide most of the funds for fish and wildlife management and general conservation, how vital sportsmen are to the general economy, and their potential as a political force for conservation.

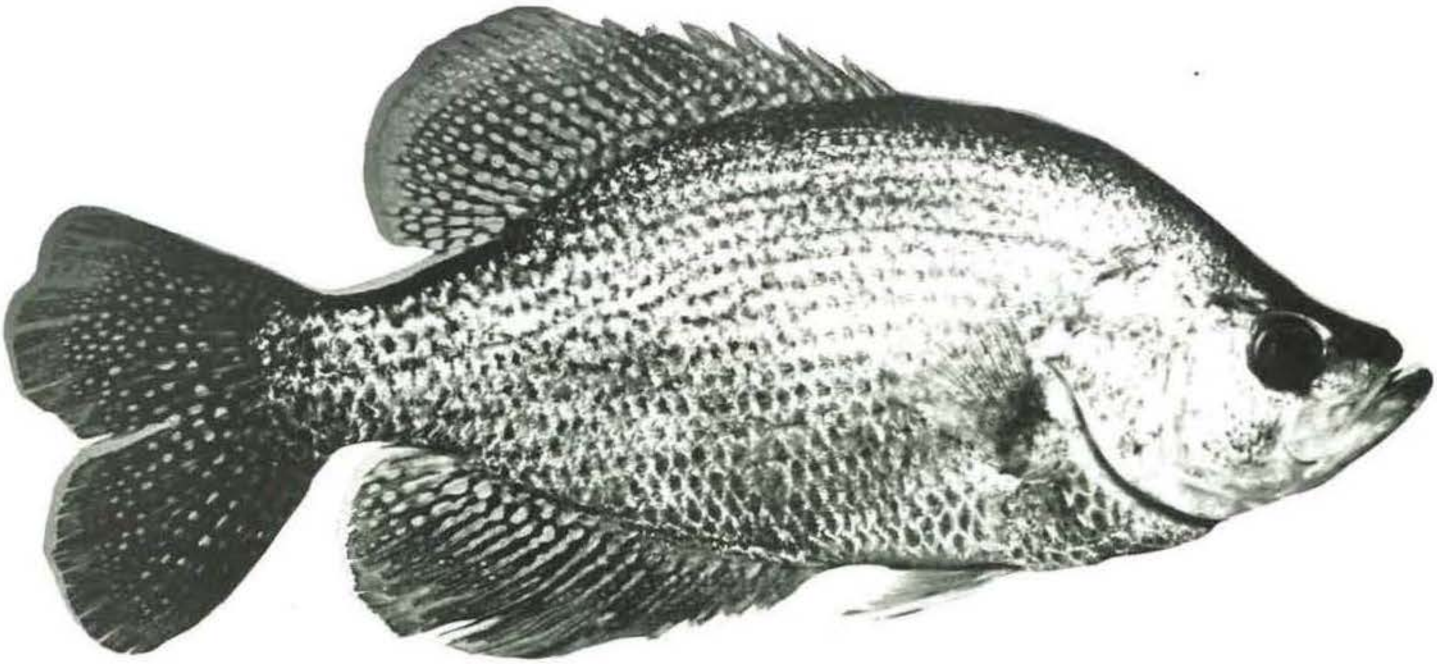
No one has yet come up with a method for measuring the aesthetic value of hunting and fishing.

How much is it worth to a tired city businessman to spend a day fishing for largemouth bass? How much is it worth to a father to watch his son catch that very first bluegill? How much is it worth to the boy to catch it? How much would a mother take for the expression on her son's face when he comes home with his first duck?

There'll never be a way of measuring such values, but 55 million Americans who hunt and fish know what we're talking about. ●

Photo By Art Runnels

The most lasting values of fishing and hunting are intangible. Nobody has yet devised any way to place dollar signs next to good fun and experience being out-of-doors. How much is this child's first bream worth to him? And to his dad? What's the young hunter's smile worth as he retrieves his first duck?



Specks Are Special

when the water's cold, the angling action's hot

THE RED AND WHITE plastic bobber bounced gently and sank from view. I wasn't ready. As my hand touched the cane pole, the float squirted back to the top, and I knew I'd been had—again.

Ed Taylor chuckled as I glanced around to see whether or not he had seen what had happened.

"You gotta be just a little quicker," he offered, "but you gotta be gentle, too, remember."

I put on a fresh minnow, dropped him over, and shortly the float again moved downward steadily through the brown-stained water of Lake George. This time I'd kept a paw near the pole, and just as soon as I felt he had it good I lifted him, tugging and turning, toward the surface. At the end of the line, still with my lip-hooked minnow in its jaws, was a nice black crappie (or speckled perch, if you prefer), a 1-pounder, I guessed. A small one.

My next bait wasn't quite in the water when another of my three cane poles was dancing in its metal holder, attached to the gunwale of Ed's fishing boat. Turning quickly from port to starboard, I began "escalating" my new customer to the daylight. As the sun got in its eyes, though, this speck decided against coming aboard, and with one fancy flounce against my tight line it was off the hook and gone. Maybe in my excitement I had pulled too hard on him, knowing full well you can't rush a speck because its mouth is soft and tears easily.

This early morning action indicated to my fishing buddies, Jim Carter, of Orlando, and Ed, our host, from Palatka, that it had been a long time since I'd been out just for black crappie. But in a few minutes on that beautiful June morning, with the water slick as glass, I had regained the old touch. (It's a little like riding a bicycle; you never forget how, but you sure can get out of practice.) Before we had to go in, around noon, we had filled an ice chest with specks—half a hundred or so, up to 2 pounds—and Ed told us they were biting pretty slow.

Black crappie, *Pomoxis nigromaculatus,* are found throughout Florida, and sport fishermen go after them at all times of the year, with all kinds of bait and tackle, by day and by night. I've seen entire families line the canal banks down around Lake Okeechobee and catch crappie by the double stringerful. I've seen boats on Lake George, where we fished, cluster around a good fishing bottom, poles bristling like porcupine quills as young and old pulled fish aboard. A common sight on most any big central Florida lake is an armada of fishing boats drifting across in quest of crappie, then cranking up and covering the same areas time after time as the fish are found. Bridge fishermen with gas lanterns hanging low over the water pull in the crappie regularly in long, pleasant hours of night fishing, aided by the bugs and minnows attracted to the glowing lights.

Spawning time is the best time for crappie fishing, and the expendable males are most often caught then because they're actively guarding eggs, fanning nests, or getting ready to do one or the other. The females are probably not as concentrated at one time and in one place as are the rooster fish.

When the water temperature drops into the middle 60's, these fish start to spawn. This means it's sometimes real cold topside. Crappie fishing, then, is cold weather fishing. They start in September or October and spawn right through January and February, the peak months, and into the early spring.

You'll find black crappie in relatively shallow water at spawning time; in the deeper channels and holes in summer. Fish at various depths until you find them, then stick with that depth. Most speck fishermen agree that a bait has to be served pretty close to him before this fish will take it. They don't rise or sink much to feed, at least not on a baited hook.

Cloudy, dull days are probably best for crappie fishing, and if you can find some sunken brush pile, tree top, or similar structure, all the better. When the sun is out, specks head for the shade.

Fish for these gregarious panfish near the bottom to begin with. Then, if you can establish through trial and error that they're somewhere above, put your bait there until they aren't biting anymore. Sometimes a few inches above or below a given depth will mean no hitting. A slight adjustment, and "wham!" Minnows fished around snags and under docks and bridges, near the bottom, are about the best means of finding out if the specks are home.

Another method that works for some anglers is to locate the fish with minnows—over a wide shallow bottom, for example, or at the edge of a drop-off—then switch to artificials. A wide variety of small, minnowlike lures will catch crappie, including leadhead jigs, usually in white, silver, or yellow; streamer flies; spinners, often with a strip of pork rind attached; and the artificial minnow look-alikes.

Some employ a vertical jigging method successfully. By hopping the lure up and down near the bottom, the fish takes it either at the top or bottom of the hop. This is especially good where snags and other obstructions are found, making casting and straight retrieves impossible.

One thing to keep in mind: Regardless of your fishing method, always carry more bait than you expect to use, and plan to come home with a lot less than you started out with. Lures do get tangled and, with light monofilament, break off pretty often. Likewise, minnows are pretty fragile at best. Some die, some are stolen, as I found out on Lake George, and some, of course, catch fish. You can go through a few dozen minnows in a day's fishing.

Hatchery minnows are available around most good crappie fishing waters, but you can seine or hook your own to keep down the cost. A styrofoam bucket or box holds them well. Some anglers hook their bait minnows through the eye sockets, some through the lips, and some through the fleshy part of the tail behind the dorsal fin. I've also heard of clipping one lobe of the tail to make a minnow wobble more seductively.

Whatever your preferred place, tackle, or manner of fishing for black crappie, they're fun to catch, they come in bunches, and they're good to eat. And now's the time to go get 'em. ●

By GENE SMITH

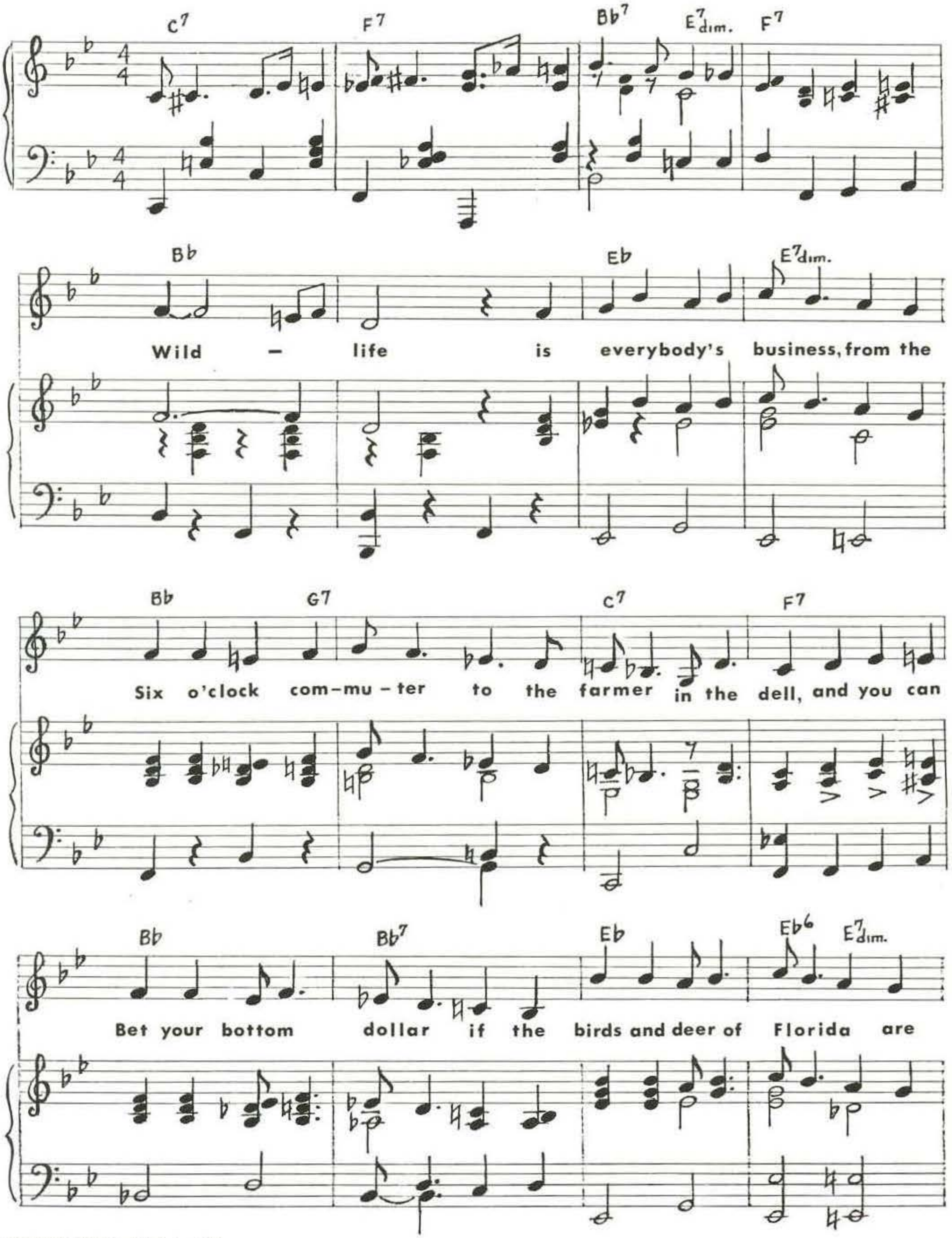
Photo By Wallace Hughes

Water temperatures in the mid-60's trigger crappie spawning, in shallows near the edge or on wide flats up to 12 feet deep in open water. Specks usually hit well or not at all. Crappie move a lot—and so do the fishermen.

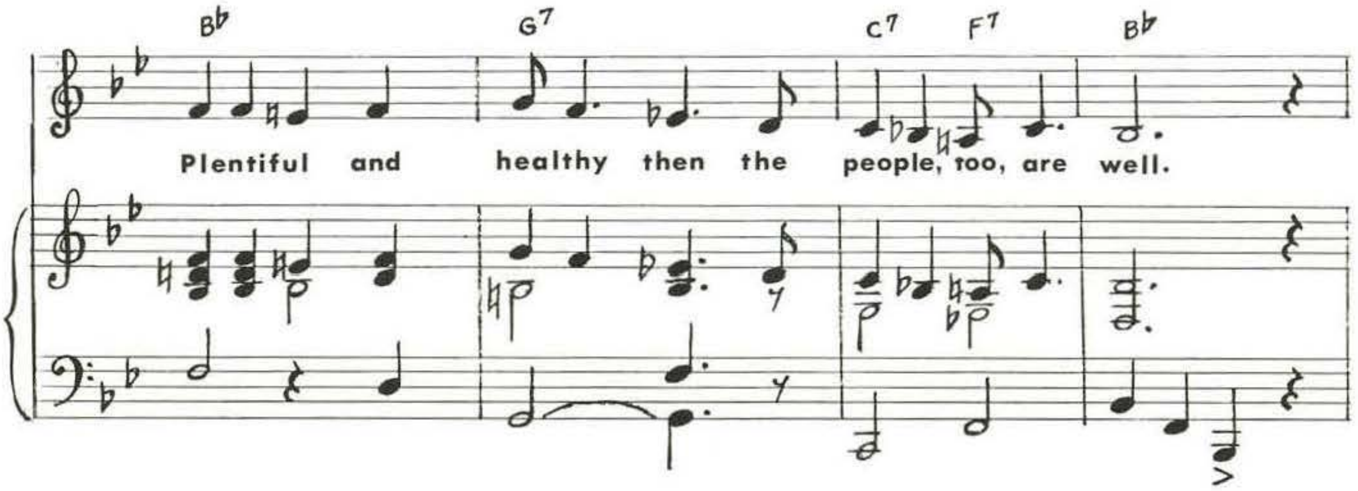
Wildlife Is Everybody's Business

words and music

By RALPH A. MILLS


C7
F7
Bb7
E7dim.
F7
Bb
Eb
E7dim.
Wild – life is everybody's business, from the
Bb
G7
C7
F7
Six o'clock com–mu–ter to the farmer in the dell, and you can
Bb
Bb7
Eb
Eb6
E7dim.
Bet your bottom dollar if the birds and deer of Florida are

Copyright 1973 By Ralph A. Mills



A fish fry. . .
  Is everybody's business,
But you can't have a fish fry
  If the fish have gone away.
And if we keep right on pollutin'
  And not caring what we're shootin'
There will never be a fish fry
  Or another hunting day!

A bird's song. . .
  Is everybody's business.
And who could say a song bird
  Doesn't brighten up the day?
But if we keep right on pollutin'
  And not caring what we're shootin'
We will never hear a song bird,
  'Cause they'll all have flown away.

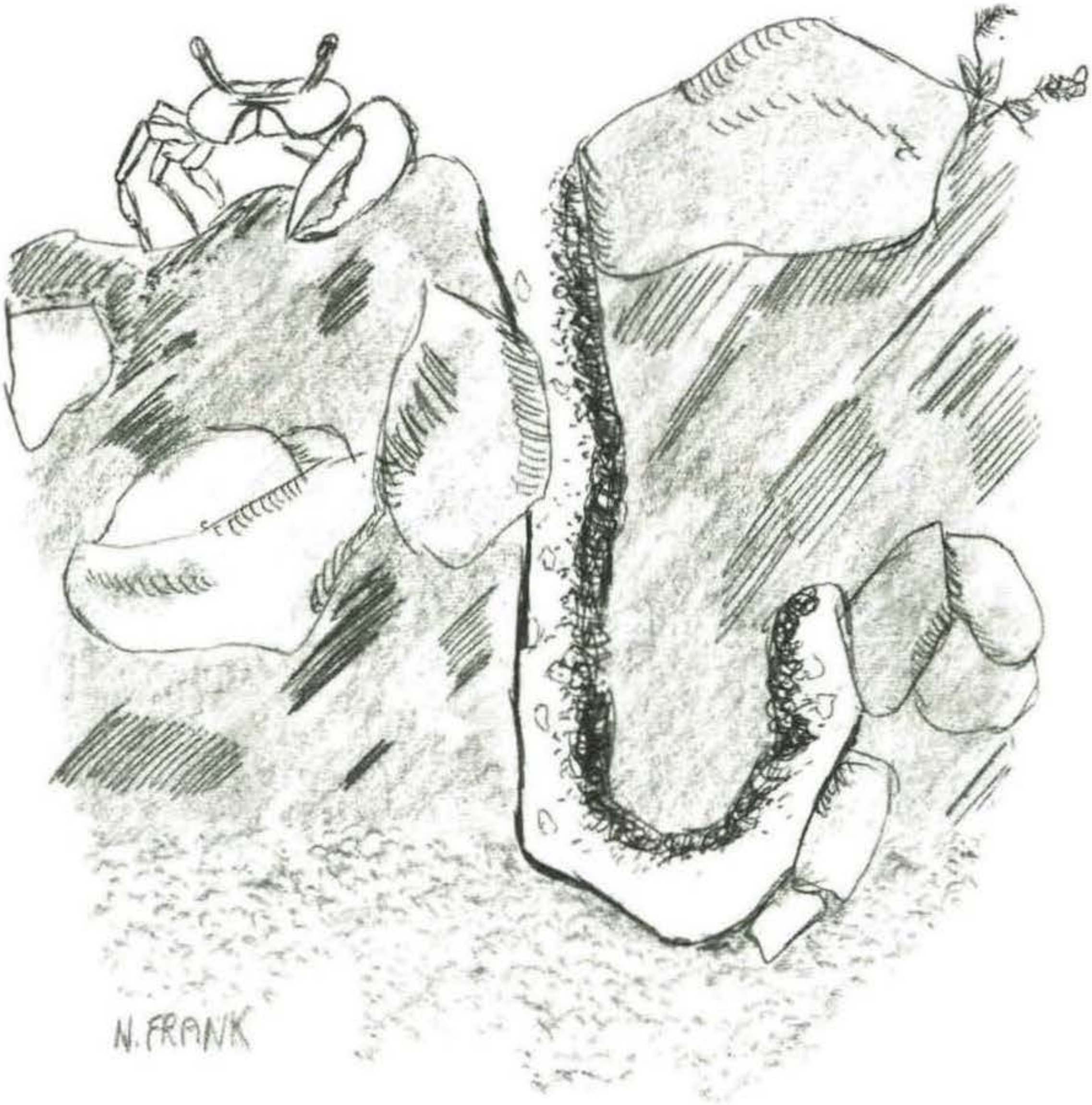
Alligators. . .
  Are everybody's business.
If you don't really think so
  Take a 'gator on a bus.
But if he is his lips a-smackin'
  And you want to send him packin'
In 'gator transportation,
  There is no one else but us.

Ecology. . .
  Is everybody's business,
If the trees should all stop breathing
  Then, believe me, life would stall!
And to control the dredging, filling
  Save the habitat we're killing,
Support the Game Commission
  And you'll help to save us all.

A walk in the woods. . .
  Is everybody's business
And a picnic in the forest
  Can be fun for one and all.
But will some ancient storyteller
  In the future's dim remembrance,
Tell about a thing called "picnic"
  In some place he can't recall?

What to do?. . .
  The answer now is up to you.
If we don't keep on trying
  Won't tomorrow rue today?
And to the future leave a memory,
  Or can we leave a legacy?
Support the Fish Commission
  And you'll help to find a way!

LIBRARY
MARINE RESEARCH LABORATORY
FLORIDA DEPT. NATURAL RESOURCES



A Colony of Crabs

From force of habit my eyes drifted across the ground ahead as I walked. Under a cluster of palms the grass gave way to barren dirt, packed hard like the soil beneath a playground swing.

As I approached there was a scurry of activity on the ground. I stopped—the scurrying stopped! I strained to focus on the cause of the commotion but could see nothing. I took another step—more scurrying. This time I was able to pick out moving objects. They were small, roughly the size of a coffee cup, and seemed to vanish into thin air, allowing me only a fleeting and teasing glimpse.

Since I was fairly near the Miami River, my first thought was that these were rats. The size of the animals could easily be correlated, and given the general environment of the waterfront, this was reasonable. But the motion I had seen was not rodentlike. It was not smooth. It was rather jerky and sporadic—a stop-and-go sort of action. What I had happened upon, I realized only after waiting, observing, and "librarying" a little, was a colony of walking crabs, *Cardisoma guanhumi*.

These curious crustaceans, horoscopic patron of people born between June 21st and July 22nd, have fascinated and excited the imagination of man since Biblical times. Hardly is there an animal personality *less* deserving of this attention. Innocuous and secretive, most of their time is spent scavenging for food and keeping their burrows operational.

Biologically, however, they are an anomalous and exciting group. Though they are primarily land dwellers, they can live and breathe in either fresh or salt water. This is made possible by the presence of tiny respiratory cavities which have replaced the gills. In these vascularized chambers the blood is so close to the surface that oxygen can be extracted directly from both air and water. Thus freed from a marine environment, these animals have become terrestrial, returning to the sea only to spawn.

Their burrows extend down to the water level as deep as 7 feet below the surface and provide the crabs with drinking water. These tunnels are usually simple, without side branches or chambers. They "disappear" into the ground nearly vertically and, after dipping into the water, hook back up for a short distance. This forms a blind pouch in which the animal can seek shelter from predators and climatic extremes.

The eyes of the walking crab also represent an interesting adaptation by this animal to its peripatetic existence. Perched atop long stalks, they can pick up visual stimuli from a full 360 degrees around and from any angle overhead as well. The eyes are compound, as in a fly, giving a strong, though not detailed, image.

I have seen an entire colony of walking crabs run for cover as an airplane passed overhead, momentarily causing a shift in shadows.

When the crab is ready to enter its burrow the prominent eye stalks are lowered into special grooves on the top shell.

In the months following my discovery I visited the colony several times a week. The routine was always the same: As I approached, each crab ran into its own burrow, which was often 10 to 15 feet away, passing up closer holes. After I got settled, the crabs slowly reappeared, the smaller ones first, then the larger ones. Each animal would first present its folded, knucklelike claw, called the "fiddle" in folklore, then quickly pop its "periscopes" up to have a look around the outside world. If all seemed well, it would crawl out of its subterranean shelter and sit at the entrance.

Individual crabs became recognizable: The large male whose home was under the fig root; the lavender female near the cabbage palm; and the dark blue male that had three legs missing on one side and whom I called Peter Stuyvesant.

After about 15 minutes the entire colony would be abuzz with activity. Each crab seemed to follow a set route, only occasionally veering off to explore other areas. Some only traveled in straight lines to the left of their holes; others, to the right. Still others walked in huge arcs, always in the same direction and always over the same ground.

I learned, through a phone call to the University of Miami, that these animals like carrots. I shredded the vegetable and spread a few piles around. They loved this and would happily haul each pile of

(*Continued on next page*)

By NORMAN FRANK

Land crab's burrow, left, has deadend pouch. For added safety, it's built like a sink trap—extends below the waterline and hooks upward to dry ground. The colony, below, is abuzz with activity because it's feeding time.

Photo By Norman Frank

(*Continued from preceding page*)

shreddings back into their homes. If two crabs met at the same pile, each would throw out its claws in a defensive position and the pair would jockey for some not-clearly-defined superiority. Finally, one would retreat and the other would eat some carrots on the spot and haul as much of the remainder back to its burrow as possible.

I always left these excursions impressed by the degree of adaptation these originally marine animals show to their land-dwelling existence. It has been observed in the research laboratory that *Cardisoma* can live for many days in humid air with no water, and even several days under extremely dry conditions.

Yet, the walking crab must still pass through its earliest stages of life in salt water. Copulation, including internal fertilization, probably takes place about a month prior to spawning. Adult females generally change colors, from blue to white or yellow, at the time of ovulation. The fertilized eggs are carried as a compact shiny mass on the female's abdomen until they are ready to be released into the water. At that time she starts an overland spawning migration, usually in conjunction with an autumn full moon. During these migrations great numbers of crabs can be seen crossing fields and roads on their way to the sea. The sight is quite eerie. The crabs, illuminated only by moonlight, look like hundreds of hands crawling around. Upon reaching the salt water, the eggs are released.

The larvae hatch and mature, passing through two stages before reaching adulthood. In the juvenile stage it is extremely hard to differentiate the sexes. The body color is golden tan or brown with scattered purple spots. The claws are unequal in size.

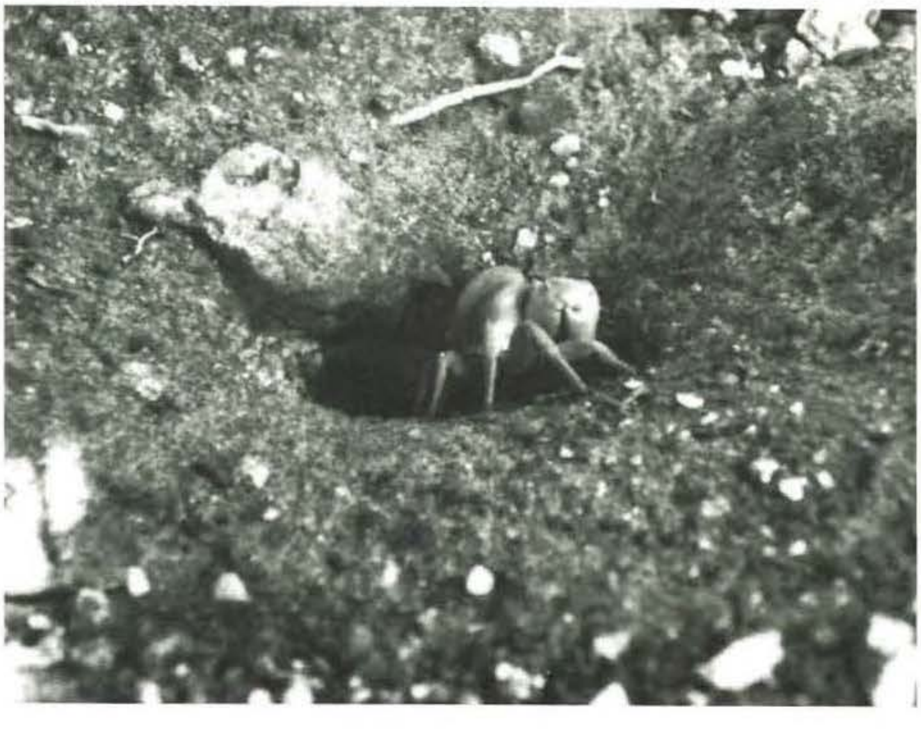
The adolescent, or transitional stage, crab is colored similarly to the juvenile—but the beginnings of structural differences are present. There are changes between males and females in the shape of the bottom shell and, more significantly, in the shape of the major claw. These differences will persist throughout the adult life of the animal. The large claw itself can occur on the right or left side.

Between the adolescent and the adult there is little structural change. Except for size, the difference is one of color. Adults, other than females which have recently ovulated, are blue.

It is not known how long the walking crab lives, but 5 to 10 years is not an unreasonable guess. They have very few natural enemies, possibly only the raccoon in our area. In many parts of their range, however, which includes the east coast of the Americas from Florida to Brazil and the Caribbean Islands, man considers them a delicacy and thus represents a major predator. Also in parts of their range, especially in cosmopolitan areas such as Miami, automobiles kill many migrating crabs, and highrise apartments claim much of the animal's natural habitat.

Possessed of a constitutional timidity, along with knotty limbs and gawky gait, this small crustacean would seem ill-equipped to exist in an increasingly hostile environment. Yet its great adaptability enables the walking crab to flourish. Observers report no appreciable decline in numbers of migrating or netted individuals. And it's still possible to find areas of barren dirt under clustered palms where a scurry of activity awaits even the casual observer. ●

Photo By Norman Frank



Before exiting, a crab presents a claw presumably to test the air for enemies. Next it raises its stalked eyes for a periscopelike view of the terrain. If all is well, it ventures forth, always remaining within easy reach of burrow.

How To Care For
OILY BIRDS

WHAT SHOULD YOU DO when an oil spill occurs, and birds along your shorelines are in trouble?

The best first step for the concerned individual is to volunteer his services to emergency rescue centers organized by the state wildlife conservation agency, says a newly published booklet, "Operation Rescue."

The booklet was written by bird rehabilitation expert Philip B. Stanton under the auspices of the American Petroleum Institute. Stanton, a member of the Framingham State College biology faculty, maintains a bird rehabilitation center in Upton, Mass. Drawing on this experience, he details in pictures and prose how to capture and handle oiled birds, clean them, and finally release them back to nature.

For example, the author indicates that a careful initial selection should be made of which birds to rescue. One slightly oiled may have a better chance of survival if left alone in its own environment. If a bird is covered with thick oil, on the other hand, and largely immobile and appears near death, it may be best to destroy it humanely. And rare species merit more attention than more populous ones.

Here are other tips gleaned from the booklet:

—Apparel for the rescuer should include gloves, waders or wet suit, and safety goggles, for birds in distress may attack the eyes.

—A useful instrument for capturing oiled birds—though they often may be caught by hand—is a long-handled net of the type used for landing fish. It should have small mesh to prevent entanglement of beak, feet and wings.

Photos By Robert Wood

—A captured bird should be kept initially in a ventilated cardboard box, several birds to a box if the species is small, one to a box if large. A solid lid on the box helps keep the birds quiet. Birds may also be held temporarily and transported in vegetable crates, which have side slits for good ventilation, and may be stacked.

—Close bills with a rubber band to prevent preening and thus ingestion of oil.

—Clean only affected areas. Birds only slightly oiled and cleaned have the best chance of survival.

In handling and cleaning a bird, Stanton says, hold the wings carefully along the back with one hand, and while supporting the bird's weight with the other hand (this method is illustrated with photos in the booklet), partly submerge the bird and gently wash tail feathers first, then rest of bird—wings, neck, back, and breast.

Stanton says care and rehabilitation efforts after cleaning represent about 90 per cent of the problem. The birds cannot be returned to their natural environment immediately. They must be cared for until their plumage returns to its natural state, which sometimes takes months. And some birds—auks, loons, and grebes, among others—are extremely difficult to rehabilitate, for they are not adaptable to life on land.

The Stanton booklet goes into detail on these and many other problems concerning oiled-bird rescue techniques. Single copies may be obtained free of charge by writing to Distribution Services, American Petroleum Institute, 1801 K Street, N.W., Washington, D.C. 20006. Multiple copies may be purchased for 35 cents each with special discounts on quantities of more than 100. ●

wishing well
BASS

water hyacinths are costly pests, but also prove attractive to meandering largemouths

EARLY ONE BRISK November morning a few years ago, trudging through the tall grass along the edge of the St. Johns River near Deland, I came upon my fishing pal. He was parked on an old bucket, almost hidden from view by the bushes.

When he saw me, Barney called out, "Why don't you try gettin' up in the *morning*, Bob? I've been here over an hour," and he held up a good-sized bass.

"Great," I called back, "You must have caught shiners in a hurry."

"Yeah, I was lucky. They were down the river a little way. I got eight good ones, just the right size."

That meant big ones, for Barney and I fish with 5- to 7-inch wild golden shiners. We're almost always after *big bass*.

To back up a little, I had moved to Deland from the North about a year earlier, and it hadn't taken me long to start inquiring about bass fishing in central Florida. The name Barney Herrin kept cropping up when I talked to local fishing camp operators and tackle shop owners. I was told he was "about the best old-time bass fisherman for miles around." I looked him up, of course, and he offered to take me fishing.

Barney was frank in telling me he fished quite differently from most bass fishermen, and that he had his own little tricks that worked for him. He didn't elaborate, but he didn't have to; he had my undivided attention. We set a date to go fishing, and I rather suspected Barney was curious to find out how this Yankee would stack up as a bass fisherman working Florida waters.

He soon found out, and told me I'd do better if I changed my ways. He said my more conventional approach just wouldn't work where he fished.

I was eager to learn his methods and any of those little tricks he'd care to share with me. Soon I was fishing as he did.

I was flabbergasted when Barney showed me the shiners he had caught that November morning near

Whitehair Bridge. They looked so big I couldn't believe it was possible to use them for fish bait. He showed me how to use them with his unusual tackle.

We caught a few bass, but no lunkers. Nonetheless, I was convinced that Barney Herrin's reputation as a bass fisherman was well-deserved.

We've been fishing pals for some time now, fishing in the lakes and the St. Johns River in Volusia County. The two of us have caught eight 12-pound and six 10-pound bass, fishing only for lunkers, usually in masses of water hyacinths. (We get "skunked" on most of our trips, for you just don't catch "our kind" of bass every time you go out.)

With occasional exceptions, to catch big bass you have to fish for big bass. We have caught fewer bass over a period of 3 or 4 years than scores of other bass fishermen. And small bass may occasionally try to take a "lunker" shiner, but this, too, is the exception rather than the rule.

As most fishermen will do, we have developed a definite bass fishing routine. It is unconventional, and some will say we do it the hard way.

We are bank fishermen. We locate places where the water is 4 to 6 feet deep near the shore, and in which floating hyacinths are massed. We make a 2- to 3-foot hole in the hyacinths that resembles a window, or a well, a little. To clear the opening, we use a 20-foot pole that has a small gaff hook on the end. With this pole the hyacinths are easily pulled apart.

There is an alternate method in which a brick tied to the end of a long rope is thrown out and pulled back through the hyacinths to clear a spot. It usually is necessary to make two or three throws, so when this method is used, it is necessary to wait for a while before starting to fish. The disturbance in the water temporarily scares away any bass close at hand.

By ROBERT B. WEAVER

Big bass seem to gravitate toward areas sheltered by hyacinths, and they definitely can be lured out from under these shady mats with the right bait. (See "Hyacinth Beds for Lunker Bass," by Marvin Winans, FLORIDA WILDLIFE, October 1971, page 10). The basic problem is locating the best areas through which to fish if you've elected to fish from the shore instead of from a boat.

Once the right areas are found and bass are caught, return trips to the same places are recommended. Barney and I have a dozen good places where we've caught bass, and we return to those spots time and time again, frequently with good results. We prefer fishing these few selected spots to scouting around in a boat fishing in many untried places. When a boat is used, there is the temptation to try out many different places rather than fishing a few places thoroughly.

Fishing in a hole made in hyacinths poses many problems, but they're the kind that are great fun to solve. Heavy tackle—particularly heavy line—is absolutely necessary.

The outfit we have found most satisfactory is an 18- to 20-foot cane pole fitted with screw eyes to hold 30- or 40-pound test line in place. A reel is clamped to the pole about 18 inches from the butt-end. We use a short-shank No. 6/0 or 8/0 hook. A small sinker may be attached near the hook to keep a shiner deep in the water so it won't lose its action by getting tangled in the hyacinth roots overhead.

A water hyacinth bulb tied about 2 or 3 feet from the hook serves as a bobber. This is better than a spring bobber, which gets caught in the hyacinths and holds. The bulb bobber will tear loose easily after a bass is hooked and gets into the greenery.

As I indicated, we prefer 5- to 7-inch shiners for bait. A large bait has more action in the water than a small one. Moreover, a bass is more likely to be attracted to a big shiner that will furnish a full meal.

The recorded catches of big bass (10 pounds or

(*Continued on next page*)

Chances of landing a lunker bass are good if you head for the hyacinths and fish through the mats with big shiners.

Drawing and Photo By Wallace Hughes

(Continued from preceding page)

over) that have come from the St. Johns River and the lakes of Volusia County over a period of years reveal that most often, big shiners were used for bait.

Of course, big bass *are* sometimes caught with small shiners, but the odds are definitely against it, as we pointed out earlier.

Barney and I sometimes are unable to catch or buy large wild shiners, so we are forced to use hatchery-produced shiners. We use smaller hooks with these, and we occasionally get a fairly good-sized bass. There's no getting out of our minds, though, the general rule that big bass are mostly caught with big shiners—"the bigger the better," as one noted Florida fishing writer recently put it.

Here's how we fish for the lunkers:

Standing on the shore, and having opened a window in the hyacinths, the shiner is brought over the hole and dropped into the water with a slow, underhand swing of the long pole. The bait is then surrounded with hyacinths and is held in place in a small area. It can't go far because the line is lying on top of the hyacinths. The pole is placed on the ground, so a part of it will be on top of the hyacinth mat too. The reel handle is *up*, ready to spin when a bass strikes.

Now, the waiting begins. This kind of fishing takes a lot of patience, but when the action starts you forget all about what a long wait it might have been.

When a bass strikes, give it time to make two or three runs under the hyacinths. Then, with a tight line, plant your feet and set the hook with a snappy upward yank of the pole. From here on, the action is much the same as though a rod were being used.

In time, the bass will be fairly well played out and can be brought back into the hole in the hyacinths. Sometimes, however, when the head of a big bass is raised out of the water it gets another urge to take off. It may drive through the scattered hyacinths, taking out more line and providing all the challenging action any bass fisherman could ask for!

Eventually, the fish can be lifted through the hole and slid over the mat of hyacinths to shore—an operation in which the long-handled gaff hook comes in handy.

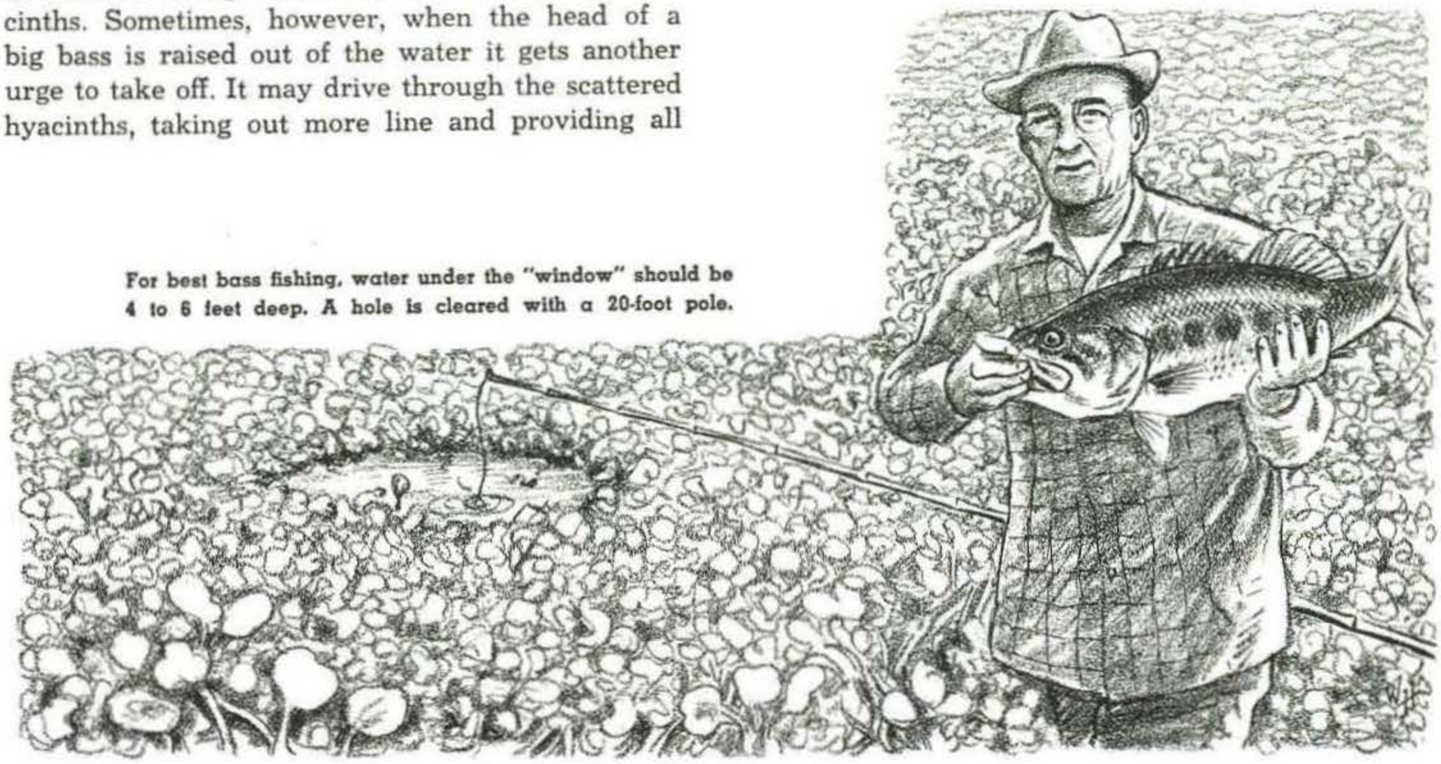
Usually, the bass we catch have swallowed the shiner and are well-hooked. Once in a while, though, the hook is in the lip of the bass, in tender flesh. This may happen when not enough time was given for the bass to take the bait and make at least two runs with slack line.

Obviously, in this kind of fishing the strong line is a must. You're expecting to be handling big, bruising fish, remember, and you'll also be fighting not only the bass but clusters of water hyacinths as well. A spinning outfit with a light line just won't do. And, a bait casting outfit is impractical, for it is difficult, if not impossible, to get the shiner in the hole with it. Moreover, it is unlikely the live bait can be kept there if it does drop in on the fourth or fifth cast. So, it isn't the added strength of the bamboo pole that is preferred, as much as it is the *length*.

The long pole, rigged as described, is really the best equipment for "fishing in the well." I am sure many good bass fishermen frown on this kind of angling. In fact, there are times when Barney and I prefer to fish open water by more conventional methods and with more conventional bait and tackle. But when we get to thinking seriously about catching a *real lunker bigmouth* or two, we go right back to kicking holes in the old familiar hyacinth beds and soaking big shiners.

Try it. You may like it too. ●

Drawing By Wallace Hughes



For best bass fishing, water under the "window" should be 4 to 6 feet deep. A hole is cleared with a 20-foot pole.

Stock Talk

altering a poorly fitting shotgun or rifle stock requires know-how, patience, and effort, but it pays off in better shooting

By EDMUND McLAURIN

BY THIS STAGE of the hunting season you should know whether or not that new shotgun or rifle purchased at the beginning of the season fits you.

The odds are that it doesn't. Our physiques and arm lengths are so different that many standard model shotgun and rifle stocks often fail us individually in respect to true fit. They're designed by gunmakers for a mythical "average physique," so sometimes a gunstock comes from the factory too short or too long for the customer. Until proper length of pull is obtained, some of us will hunt under a degree of handicap even before we pull the trigger.

Length of pull, as some readers might not know, is the distance from the center curve of the trigger straight back to the center of the back surface of the stock. Too long a length of pull (for *your* arm length) in a shotgun, for example, will cause you to habitually throw the shot charge to the left of your target—if you're shooting right-handed. If the stock is too short, then quite likely you have a tendency to pull to the right.

Similar handicaps to good shooting can easily exist in a big game rifle. Too short a stock, combined with a scope sight of shallow eye relief, can cause a nasty cut on the nose, brow, or forehead when making a hurried shot or when firing with the muzzle inclined upward, as is often common in mountain country.

Any gunstock that is too long can catch on clothing when hurriedly shouldered. This impediment, though only momentary, spoils coordinated gun handling movement and sometimes contributes directly to inaccurate aim.

Wrong length in a stock can impart punishing recoil. This is especially true of some of the 12-gauge magnum shotguns and loads, and of certain hard-bucking big game rifle calibers. Nobody can shoot well when subconsciously afraid or consciously dreading recoil. They'll flinch on almost every shot.

A mere half-inch either way in length of pull can make a great deal of difference in the way the shotgun or rifle mounts to the shoulder and how much fun it is to shoot, not to mention the resulting opportunity for better accuracy.

The average factory-made shotgun stock is cut to give a longer length of pull than the average factory rifle stock, and rightly so. A shotgun is handled differently than a rifle.

Usually, an average shooter can handle even a fairly long shotgun stock with good results. But a long stock on a big game rifle would prove a major barrier to good performance. That's why a good fitting rifle stock will average an inch shorter than a good fitting shotgun stock used by the same shooter. They are two different breeds.

Fortunately, the problem of too long or too short a gunstock is easily solved, along with reduction of firing recoil to noticeable degree. You merely alter the present length of pull to correct length that includes the thickness of an added recoil pad.

Ascertaining correct length of pull and fitting a recoil pad of proper thickness are jobs many shooters regard as relatively easy. For example, they mistakenly believe that proper length of pull can be determined by laying the butt of the gun against the inside of the arm at the bent elbow and noting how naturally the forefinger finds the trigger. Not so!

Length of pull on a shotgun should be correctly checked by the repeated test-shouldering of the gun while wearing hunting clothing of the thickness usually worn in the field. There should be at least an inch of clearance between the shooter's nose and the thumb of the hand that grips the stock. If the thumb knuckle is resting against the nose *before* he fires, the shooter is sure to get a good nose bumping *when* he fires, and that's no fun! (I do believe, however, that it is advantageous to use as short a length of pull as is consistent with obtaining the necessary clearance.)

If the stock is too short, one can increase the length of pull by substituting for the factory butt-plate a recoil pad of needed thickness, or by inserting neoprene or plastic spacers between the wood and the factory-installed pad, if the gun has one.

If the stock is too long, you simply cut off the butt-end to the proper length that includes the thickness of the pad you're adding.

To determine the needed additional length for too short a stock, remove the butt-plate and add thicknesses of hard cardboard or wood until correct length of pull is achieved. You then measure and record the correct length of pull—from the middle of the trigger to the rear center of the stock, including whatever cardboard or wood has been attached while experimenting. The thickness of the

(*Continued on next page*)

(*Continued from preceding page*)

recoil pad selected for fitting should be the same as those temporary attachments, naturally.

So what about shortening a stock? The cutting should be done with a sharp, fine-toothed backsaw along a sawline that maintains the pitch, or angle, given the butt of the stock at the factory. (You may profit by getting a good outline drawing of the entire stock before starting to cut.)

Remove the butt-plate or pad and tape the back half of the stock with masking tape to avoid scratching the stock or splintering the wood when sawing.

Experiment by gradually reducing the stock in length in trial cuts of ¼-inch thicknesses until the proper length of pull is achieved without a recoil pad attached. (By making the thin trial cut-offs, you're never in danger of making a radical over-cut; and any slight over-cutting error within the ¼-inch working margin can always be corrected by adding a decorative spacer.) Now saw off a thickness of butt-end wood equal to that of the recoil pad you want to add—making one last check for correct length of pull before you cut and being sure you give the butt the same pitch it had when you started—unless, of course, you are deliberately altering the pitch for good reason.

After careful, unhurried sawing, without much downward pressure on the saw, the final cut should be tested for flatness by use of a combination square. When the butt-end surface wood meets this test, the cut-off stock is ready for fitting of the recoil pad.

Most American custom gunsmiths use Pachmayr "White Line" recoil pads. Made of neoprene rubber, the pads are impervious to the effects of weather, cleaners, or gun oils. They are made in just about any needed thickness, and in brown, red or black. I usually use brown pads because they harmonize with most dark-toned stocks.

Usually, by first attaching the recoil pad as it comes from the factory—after carefully locating the screw holes in relation to solid wood—you'll see that the pad is oversize. It'll have to be cut to good stock fit, which requires careful file finishing and sanding.

I usually scribe an outline of the stock's butt-end on the inner surface of the pad while it's attached to the gun, then remove it and cut to within 1/64-inch of the outline, except at the pad's toe. I then coat all contact surfaces with epoxy cement and replace the screws to fasten the pad permanently to the gunstock. Thereafter, little filing or sanding work is required for perfect fit all around and accurate pad toe angle and contour.

Whether or not I refinish the entire gunstock depends on how good a job I do in final stages of the pad's installation. I've learned to be extremely careful.

Of course, final finishing of the pad is easier to accomplish with professional results when you intend to later completely refinish the gunstock.

In all fairness, I must warn readers that proper and neat installation of a recoil pad to shotgun or rifle without complete stock refinishing is a job that demands fairly skillful use of the right kind of saw and other required tools, combined with close attention to detail. Any errors of workmanship are going to be obvious, and lasting advertisement of carelessness or lack of skill.

If you feel you need the assistance of illustrated texts, read "Double Duty For Recoil Pads" in HOME GUNSMITHING DIGEST, by Tommy Bish; or order photocopies of instructional texts published in the June 1955 and August 1965 issues of THE AMERICAN RIFLEMAN from National Rifle Association, 1600 Rhode Island Avenue, N.W., Washington, D.C. 20008.

If you don't want to go to the trouble of fitting a regular type recoil pad to your gunstock, you can simply determine correct length of pull; make butt-end cut-off or addition to within ¼ inch less than true length of pull, then put a ¼ inch thick Pachmayr slip-on type rubber recoil pad. A slip-on pad is quickly installed and, in proper size, hugs the gunstock snugly. It also looks neat.

I use brown rubber slip-on pads on rifle and shotgun stocks already altered to close correct length of pull, but not yet fitted with a permanently attached pad.

The Pachmayr slip-ons come in small, medium and large sizes.

If you are sure of correct length of pull, and prefer a permanent recoil pad, you can have the attachment made by a professional gunsmith and save yourself considerable work and possibly a botched job. Average charge is $4 to $6 if you furnish the pad; around $8 to $10 if you don't.

NEEDED REPLACEMENT PARTS for no longer manufactured American model rifles and shotguns—like the Winchester models 92, 64, 71, 62, 61, 90, 12 and 97; Remington models 11, 720, 24 and 31; old Stevens shotguns, and certain of the old Browning autoloaders, among many—are apt to be hard to find locally, unless a gunsmith just happens to have a remaining stock of parts acquired years ago.

Now, as models are discontinued, most manufacturers, in time, close out remaining parts to outlets that make a business of furnishing obsolete gun parts at a profit.

Factory-furnished replacement gunstocks like those once fitted to popular yesteryear models of rifles and shotguns are now especially hard to get; in fact, most models are now impossible to obtain from original manufacturer.

As I pointed out last month, modern epoxies and stock finishing compounds permit repair or rejuvenation of a broken or badly scarred and gouged gunstock beyond all former hopes or attempts. Many of these old gunstocks were made from high grade walnut and are worth restoring to usefulness and beauty.

But for those readers who would rather invest a little money than time and effort, I have good news. It concerns sources of supply for replacement stocks and fore-ends to fit a wide variety of discontinued gun models. Mostly, the items are brand new, originally made by the gun manufacturer but later sold as surplus after discontinuance of the particular model rifle or shotgun for which they were intended.

Hard-to-get-stocks, such as those for old Browning autoloading shotguns, the Remington Model 11, Winchester models 12 and 97, and others, are available from National Wood and Metal Crafts, Inc., Yorktown Heights, New York 10598, at what I consider fair prices.

Similarly, Colonial Arms & Crafts, 114 Baltimore Annapolis Blvd., N.W., Glen Burnie, Maryland 21601, has original factory model walnut stocks and forearms for many old model shotguns, including ready-to-use stocks for Winchester Model 12.

Sherwood Distributors, Inc., 7435 Greenbush Avenue, North Hollywood, California 91605, is a veritable cornucopia of replacement gunstock goodies. Available are factory stocks for Winchester models 12 and 97 shotguns; Remington models 11 and 31; Savage 620; Browning humpback receiver model autoloaders, and Winchester rifle models 92 and 94.

Vic's For Guns, 2413 Market Street, Galveston, Texas 77550, has butt and fore-end stock replacements for both 3- and 5-shot magazine models Remington Model 11 shotguns.

Ozzie's Gun Parts, Box 274, Mineral, Illinois 61344, has hard to find replacement fore-ends for old Winchester Model 90 rifles.

Butt-stocks and fore-ends to fit a variety of pump-action shotguns in 12, 16 and 20 gauge—models like old Marlin pumps, Colt slide-action, J. C. Higgins pump, Montgomery Ward Hawthorne, Jefferson and LaSalle—can be ordered from Sarco, Inc., 192 Central Avenue, Stirling, New Jersey 07980.

Practically all these firms also have metallic replacement parts for various discontinued models of rifles and shotguns. At least one of the sources should have the part you want.

Seekers of replacement gunstocks, however, hold an ace card. If they cannot obtain a factory-made replacement stock for a broken or hopelessly marred one, they can always substitute a modern, inletted, semi-finished or completely finished stock, obtainable from Reinhart Fajen, Inc., Warsaw, Missouri 65355, at nominal cost. ●

Fish Management Notes

THE FAMED DEAD LAKES are far from dead, according to fish population samples just completed by fishery biologists John Crew and Charles Knight, of DeFuniak Springs. A preliminary report of their work revealed "a surpisingly good game fish population present, with a substantial number of harvestable-size game fish available to the sport fisherman."

One-acre block nets were placed for 3 days each in the lower, middle, and upper portions of the 3,600-acre lake, located in Gulf and Calhoun counties, and long noted for excellent bass and shellcracker fishing. The first 3-day net setting resulted in the collecting of 22 different species of fish totalling 15,000 by number and 132 pounds by weight. Percentages of total weight as represented by some of the predominant species were: largemouth bass—7.12 per cent; bluegill—8.63 per cent; redear sunfish (shellcracker)—25.45 per cent; and suckers—10.23 per cent.

The biologists said largemouth bass reproduction was evident in all the samples, and redear sunfish dominated the game fish population.

"Hopefully, the drawdown that is proposed for the Dead Lakes—tentatively set for the fall of 1973—will improve fishing by helping to alleviate the problem of rampant growth of submerged aquatic vegetation, which has eliminated much of the available spawning grounds and also limited fishing space," said Crew.

A water control structure is moving toward completion at the Dead Lakes Dam. This will permit biologists to lower the water level as required for fish management purposes, including weed control.

A TENTATIVE PROPOSAL to help utilize gar and other so-called rough fish by commercial harvesting is under study by Northwest Region fishery biologists, who, along with federal biologists, are attempting to evaluate the possibilities because of public concern and interest in this type of project.

The fish would be taken in the lower Choctawhatchee River.

"FIGURES MADE AVAILABLE by the National Marine Fisheries Service, U.S. Department of Commerce, indicate that the commercial catch of fish and shellfish in Florida decreased by 10 per cent in 1971 as compared to the year 1970," reports biologist Harold Moody, of the St. Johns River Study Project. "Of the total landing of 165.3 million pounds of all species (predominantly marine and brackish forms), fresh water catfish amounted to 16.3 million pounds, and blue crab to 21.4 million pounds."

Figures supplied to Moody by a fishery reporting

(Continued on next page)

(*Continued from preceding page*)

specialist with the N.M.F.S. office in Miami indicate that of the total landing of all species of commercial fishery products from the St. Johns in 1971 (9.8 million pounds), 5.8 million pounds were fresh water catfish and 3.5 million pounds were blue crab.

A comparison of commercial catches of fresh water catfish and blue crabs from the river between 1961 and 1971 shows an interesting trend, and an encouraging one, as Moody points out.

The catfish harvest showed a regular and consistent increase each year, from the low of 2.4 million pounds in 1961, to the 11-year high of 5.8 million pounds in the 1971 catch.

"The '71 catch from the St. Johns River increased by approximately 50 per cent over the 1970 figure—rather than declining, as did the statewide commercial catch of salt water fish," Moody notes, "and furthermore, it is believed that the 1972 catch from the river will be found to surpass that of 1971."

AN APPEAL WENT OUT in December for sport fishermen in the Florida Panhandle to report catches of striped bass made in the Choctawhatchee River or its tributaries.

"We need information about striped bass catches very much," said James M. Barkuloo, biologist in charge of the U.S. Fish & Wildlife Service's striper project, headquartered in Panama City. He said reports can be made by letter, post card, telephone call, or in person.

These telephone numbers are listed for those who wish to call in information on their hook and line catches of stripers: 763-1059, Bureau of Sport Fisheries & Wildlife, Panama City; 785-5352, Florida Game & Fresh Water Fish Commission, Panama City; and 835-2622, Roy Davenport, project assistant, Striped Bass Project, BSF&W, Freeport, Fla.

Mail-in's may be addressed to the BSF&W, 1010 Beck Avenue, Panama City, Florida 32401, and to the Game & Fish Commission, P. O. Box 576, Panama City, Florida 32402 (regional office located at 226 Airport Drive).

Since the Choctawhatchee striper project began in the spring of 1968, over 1,600,000 fingerlings and subadult striped bass have been stocked in the river and its tributaries. The total is expected to exceed 2 million fish released by mid-1973, according to Barkuloo.

"Catches are being reported mostly from upriver—as far as Geneva, Alabama. I'd say some 85% of the reported hook and line stripers are caught in creeks far upriver," said the biologist, explaining that the stocked fish normally head upstream, spending their first 2 or 3 years in the shelter of fresh water stream habitat, then moving into the brackish waters of the bay.

"Fishermen around Freeport know where to catch stripers," said Barkuloo. "Some don't realize the importance of releasing the small ones so they can survive to adulthood, though. Posters have been prepared and distributed in an effort to get the word out to fishermen that the minimum legal length on striped bass is 15 inches, and the daily limit is 6 fish, under Florida law." (No striped bass may be taken by any means other than hook and line or rod and reel. Stripers accidentally taken in commercial fishermen's nets in the bay or tidal zone must, by law, be returned to the water immediately.)

Sport fishermen in the Freeport area have reported catches of stripers in the 5-6-pound class from Alaqua Creek and Bayou, and Basin Bayou. Similar catches have been made in the Niceville area, from Rocky Bayou and others.

Fishermen are reminded that a fresh water fishing license is required when fishing upstream of the fresh water-salt water line established on the east side of Choctawhatchee Bay.

THE COMMERCIAL HARVEST of catfish from Lake Okeechobee continues to decline, reports Fishery Biologist Lothian Ager, who heads the Commission's Okeechobee-Kissimmee River Study Project.

The harvest for September was 47,850 pounds (dressed)—28,852 pounds of white catfish and 18,998 pounds of channel catfish.

Ager says the harvest for September 1971 was 117,000 pounds, and for 1970, it was 68,000 pounds.

"Sampling of the commercial harvest has continued on schedule. The decline in harvest is probably related to an apparent selective mortality of unknown cause. The catfish deaths have been occurring over a period of 6 to 8 weeks, amounting to an estimated 10,000 to 15,000 pounds per day," said Ager in his October report.

A PERMIT IS NOW REQUIRED before any person, firm or corporation can conduct aquatic plant control operations in the public waters of the State of Florida, according to John W. Woods, chief of Fisheries, Game and Fresh Water Fish Commission, Tallahassee.

"Parties requiring a permit must submit pertinent information to the respective regional aquatic botanist of the Commission, whose recommendation will help the Commission determine whether to grant or reject the application for a permit," said Woods, who pointed out that he believes the Florida aquatic plant control permit system will lead to safer, more effective, and more efficient control of herbicides, while also reducing possible confusion that might result from a federally instituted program.

The new system is funded by Florida's aquatic weed trust fund, has the approval of the State Cabinet, and was adopted by the Commission on October 20, 1972, and placed into immediate effect.

Nature's Laboratory

Students and visitors learn fundamentals of entomology, soils, hydrology, biology and botany in state's newest outdoor teaching facility, Jennings Environmental Education Center in Cary State Forest, near Jacksonville.

FAR AWAY FROM BLACKBOARDS, Bunsen burners, and test tubes there is a new and special kind of "laboratory." It is tucked away in Cary State Forest, a 3,400-acre stretch of pinewoods near Baldwin, in northeast Florida.

The "lab" covers 110 acres. Its elements are simply green pines, weathered cypresses, clumps of palmettos, blackberry bushes, orchids, and mockingbirds. It is alive with ferns, and lichens growing like piano keys on a log, played only by long fingers of sunlight reaching down through the trees.

The new outdoor laboratory is the S. Bryan Jennings Environmental Education Center, a place for children to learn about the ecology of the State's native flatwoods habitat. It's a place where *seeing* is *believing* the grand design of Nature—the ties between all living things and their environment.

The new teaching facility was described by Commissioner of Agriculture Doyle Conner, speaking at dedication ceremonies held in midsummer, as "Florida's first center for the study of our natural woodland environment."

It is the first state level facility to support the Department of Education's Environmental Education program.

"The children who visit here will very probably have had little opportunity to enjoy and participate in actual studies of their natural environment. There's no doubt that many of the children who will go through this Center have led lives centered almost exclusively around the artificial environment of the city," Commissioner Conner said.

Classes are scheduled for the entire school term of 1972-73 by schools of Duval, Nassau, Clay and Baker counties and North Florida Junior College.

Also open to the public, the unique facility is set up as an open air classroom. The central gathering point is a teaching pavilion with ample space for 125 students and teachers. Besides charts and exhibits, the pavilion has facilities for showing 16mm films.

On the 110-acre woodland site immediately around the pavilion (which merges purposely into its background), a boardwalk is being built to lead visitors and students on a self-guiding nature trail. A parking area and fire tower are adjacent, along with a ranger residence. Design and construction of the $20,000 facility was by the Division of Forestry, Florida Department of Agriculture and Consumer Services.

A plaque tells that the outdoor classroom is named for S. Bryan Jennings, a longtime Jacksonville resident best known to conservationists and foresters as one of Governor John Martin's appointees to the earliest Florida Board of Forestry, in 1927.

As a reforestation pioneer, Jennings helped see forestry through its stormy years when Florida was first faced with regenerating and protecting its badly abused lands. A member of the Board for 10 years, and an ardent supporter of conservation all of his life, the Center's namesake died in 1965.

When schools are not using the Center, it is available for groups such as garden clubs, children's museums, nature study groups or other organizations. They may schedule it by calling the Division of Forestry headquarters at Jacksonville, telephone (904) 781-1434.

"Individuals or families are welcome to drop in at the Center any time during the week. They may either join in on a class or come and go at their leisure," says John M. Bethea, director of the Division of Forestry, Tallahassee.

"The Center is in a typical flatwoods ecological community, complete with all water, plant, soil, and animal associations. All factors that influence the ecology of the north Florida pinewoods are ready for viewing and study here," he adds.

"So fragile is the relationship that the Division will be adjusting its trail guide from time to time to minimize the impact of people pressure on the environment of such a small area," explains trail guide naturalist Al Simmons.

"The environmental Education Center is a good way to help impress upon children—and adults—that people can be at odds with their environment as well as in harmony with it. It will do its job only if it teaches value judgments about the environment and shapes future responsiveness to its difficulties," says Bethea. ●

CONSERVATION SCENE

Woodies for Wildlife

THE SWIFT-WINGED, colorful wood duck, a classic example of wise wildlife management, is the 1973 poster symbol of the 36th annual National Wildlife Week, March 18-24, sponsored by the National Wildlife Federation.

Though it now ranges abundantly throughout the East Coast Atlantic Flyway, the tree-nesting wood duck, with its beautiful melange of iridescent colors, was doomed for certain extermination shortly after the turn of the century. In 1918, the Migratory Bird Treaty Act accorded protection for the "woody" and, by 1941, its numbers had sufficiently increased to warrant an open hunting season in 15 states. Since that time, the small, sleek bird has been faced by other increasingly different survival problems, such as pollution, loss of habitat, and disease.

"When considering the future of the wood duck and other forms of wildlife, the value of sound wildlife management principles as determined by trained professionals can't be overrated," said Thomas L. Kimball, executive vice president of the National Wildlife Federation. "This beautiful bird survived, and will continue to survive, through the careful efforts of wildlife management experts. This not only means regulated taking when surpluses exist, but also ceasing the wanton destruction of habitat areas."

Sponsored by the 3½-million member NWF, the theme of 1973 Wildlife Week is "DISCOVER WILDLIFE—It's Too Good To Miss." With the focus on the wood duck and other residents of the natural world, and man's role in safeguarding them for future generations, the Federation is urging families to "get out and enjoy our wild resources. They really are too good to be missed."

Pets in the Wild

THE PLIGHT of wild dogs, cats, and other "Feral Animals in the City" was reported on by noted naturalist Roger Caras in the October 1972 issue of RANGER RICK'S NATURE MAGAZINE, published by the National Wildlife Federation. The word "feral" refers to domestic animals, such as cats and dogs, that have reverted to the wild, whether a rural wilderness or an urban jungle.

As with exotic pets which are released to the wild, domesticated animals have difficulty in caring for themselves, engaging in activities which are not only harmful to themselves, but to man as well. By tipping over garbage cans, they make dirty cities dirtier and aid rats in their quest for food. They can spread diseases to other animals, often valuable pets, and when roaming wild, will bite people, including children who are intrigued by the familiar appearance of the dog or cat.

Aside from staving off starvation, these animals must also be wary of the death traps which are congested city streets. And, unlike a pampered pet, roaming "wild" dogs and cats do not get the benefit of treatment by a veterinarian for any illness they contract. Thus, the average life span of the domestic pet, 14 to 15 years, is reduced to about one year for these animals when running wild.

Caras offers some solutions for the problems he recounts. First, "no dog or cat should be allowed freedom to wander in or near a city." Secondly, "unwanted pets should not be abandoned, but taken to an animal shelter like the SPCA." And lastly, animals not being used for breeding purposes should be "fixed" to prevent them from having young which might go homeless.

Wilderness Proposal

IN A RECENT message to Congress, President Nixon proposed the establishment of 16 new wilderness areas, according to the Wildlife Management Institute. If approved, the package would add 3.5 million acres to the wilderness system.

Five of the areas are located in national wildlife refuges. They are the Brigantine in New Jersey, Blackbeard Island in Georgia, Chassahowitzka in Florida, and Lostwood and Chase Lake in North Dakota. A sixth area is in the Cumberland Gap National Historical Park in Tennessee, Virginia, and Kentucky.

The proposal calls for a 2,016,181-acre wilderness in Yellowstone National Park, 512,870 in the Grand Canyon complex, 646,700 in Yosemite National Park, and 115,807 in Grand Teton National Park. An additional 216,519 acres would be designated in Colorado, North Dakota, South Dakota, New Mexico, and Hawaii.

The Wilderness Act originally established 9.1 million acres of wilderness in 1964. Since then, Congress has added an additional 1.7 million acres. This request for 3.5 million acres would bring the total to 14.3 million acres.

For that BiG ONE that didn't get away!
WHO CAUGHT WHO?
GOTCHA!

ELIGIBILITY REQUIREMENTS SPECIES

LARGEMOUTH BASS	8 pounds or larger
CHAIN PICKEREL	4 pounds or larger
BLUEGILL (BREAM)	1½ pounds or larger
SHELLCRACKER	2 pounds or larger
BLACK CRAPPIE	2 pounds or larger
RED BREAST	1 pound or larger

FLORIDA WILDLIFE'S
FISHING CITATION

is available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the fresh-water game fish of the prescribed species and size requirements. Citation, showing recorded date of the catch, will be mailed to the applicant upon receipt of the following application form that has been properly filled out and signed.

Only fishing citation applications received within 90 days from date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE Date________________
Game & Fresh Water Fish Commission, Tallahassee, Fla.

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print)____________________________

Address _________________________________

City________________ State__________ Zip No.__________

White-tailed Buck

Photo By William Greer

LIBRARY
MARINE RESEARCH LABORATOR
FLORIDA DEPT. NATURAL RESOUR